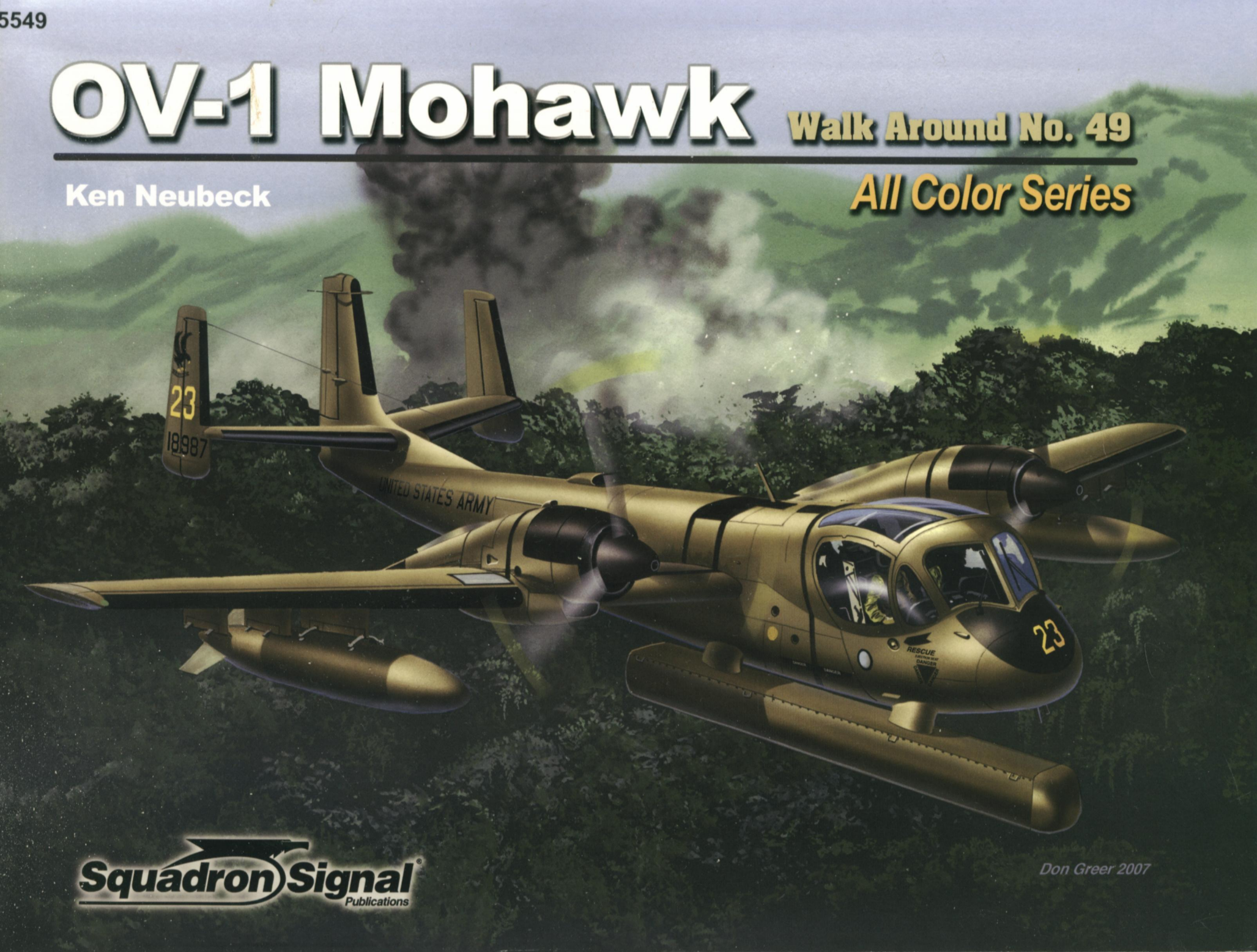
5549

# OV-1 Mohawk

## Walk Around No. 49

Ken Neubeck

All Color Series




Don Greer 2007

Squadron Signal Publications

# OV-1 Mohawk

## *Walk Around No. 49*

***Written by Ken Neubeck***

**Cover Paintings and Color Profiles**
**Don Greer**

Squadron Signal Publications

# Introduction

The Grumman OV-1 Mohawk was the first turboprop aircraft to enter into U.S. Army service to fill the role of visual, photo, and electronic reconnaissance. It was unique in its design, and it never received the recognition for its accomplishments in over 40 years of service. It was originally planned for both the U.S. Army and the U.S. Marines, but it was used solely by the Army when the Marines pulled out early in the project.

The aircraft featured two Lycoming T53-L-3 engines mounted on top of the wings. For production, the engines would later be upgraded to the L53-L-7. The aircraft featured ejection seats for the pilot and observer, because the aircraft had large propellers and conventional bailout would not be possible. The first prototype aircraft was designated as the YAO-1 and flew in April 1959; nine YAO-1 aircraft were built by Grumman Aircraft Corp. at its Bethpage facility in New York.

Formal production began in October 1959 with the official designation for the aircraft being the OV-1A and the name Mohawk assigned to it. OV-1A aircraft were initially deployed to Germany in 1961, and by 1962 they were in Vietnam. A total of 64 OV-1A Mohawks were built.

A new model, the OV-1B, was developed and this would carry a Side Looking Airborne Radar (SLAR) pod that could provide image capability in day or night or in any weather. Also, the engines were upgraded to the T53-L-15 in order to drive the air conditioning system for hot climates, such as in Vietnam. At the same time as OV-1B production, another version, the OV-1C, was produced. In addition to the optical cameras, the C featured an infrared sensor system in lieu of the SLARs. A total of 101 OV-1B and 69 OV-1C models were built with several older models being converted to the C model, bringing the total to 133 OV-1Cs.

Both the OV-1A and OV-1B models saw significant action in Vietnam with 63 planes lost during the war. The aircraft was nicknamed "whispering death" by the enemy. Controversy arose when OV-1As were armed (designated as JOV-1A). The Air Force felt that this conflicted with its mission of providing close air support. Production of the Mohawk continued at the Grumman Bethpage facility until 1964 when a lull occurred, and the Air Force and the Army worked on settling their differences regarding the role of the aircraft. During this lull, Grumman moved the production line to its facility in Stuart, Florida, where production resumed in 1967.

The last major version of the Mohawk was the OV-1D that had upgraded T53-L-701 engines along with a number of options with regard to the equipment that it would carry for the observer's role. It could either carry the SLAR or conventional camera equipment. A total of 37 OV-1Ds were built, and 110 OV-1B and C models were converted to the OV-1D configuration. Another configuration was the RV-1D that was a Mohawk outfitted with the ELINT (electronic intelligence) pod that resulted in the conversion of several dozen existing OV-1s to this model. Altogether, 380 OV-1 Mohawks were built. Foreign sales included more than 20 aircraft to the Argentine Army Aviation.

In the United States, Mohawks saw much use in other services as well. NASA had a test aircraft for testing jet engine noise. Nonmilitary use included the U.S. Forest Service, the U.S. Environmental Protection Agency, as well as U.S. Customs using aircraft to track drug traffic.

The OV-1D aircraft from the 15th Military Intelligence (MI) and the 224th MI Battalions participated in Desert Storm, accruing over 5,500 flight hours with two planes lost. The Mohawk was retired from U.S. Army service in 1996; however, about 40 Mohawks are still being flown by private owners and the Argentine Army Aviation.

## About the Walk Around/On Deck Series

The Walk Around/On Deck series is about the details of specific military equipment using color and black-and-white archival photographs and photographs of preserved and restored equipment. "Walk Around" titles are devoted to aircraft and military vehicles, while "On Deck" titles are devoted to warships. They are picture books of 80 pages, focusing on operational equipment, not one-off or experimental subjects.



## Acknowledgements

This was a challenging project, as it required photographs of several Mohawk configurations. I thank Frank Zardecki and Kevin Toolan from the Tobyhanna Army Depot in Tobyhanna, Pennsylvania, for allowing me to photograph the OV-1B on site and for valuable program information. I also thank Paul Pefley and Max Gauthier from Mohawk Technologies for their valuable assistance and for access to the company's restored aircraft. Thanks also to Josh Stoff and the Cradle of Aviation Museum, Long Island, New York, for providing archival photos as well as providing a Mohawk ejection seat for photographing. Additional thanks go to Edward Bavaro; Dave Conroe; Douglas V Guentz; John Golden; John A. Gourley III; André Jans; Gerald Nelson; the Valiant Air Command Warbird Museum, Titusville, Florida; and the Wings of Eagles Discovery Center (formerly National Warplane Museum), Horseheads, New York.

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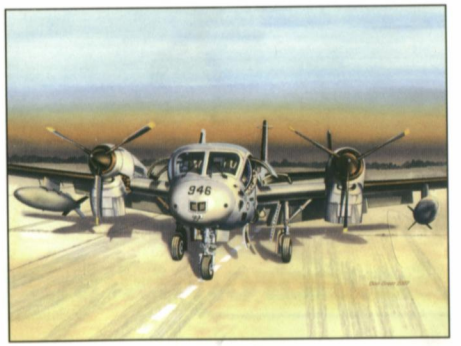
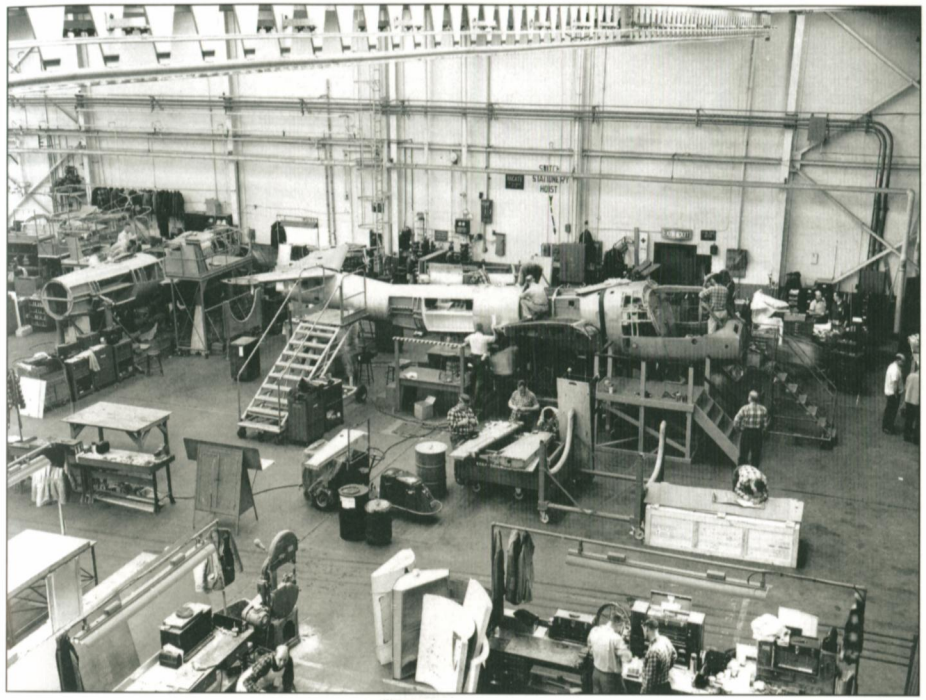


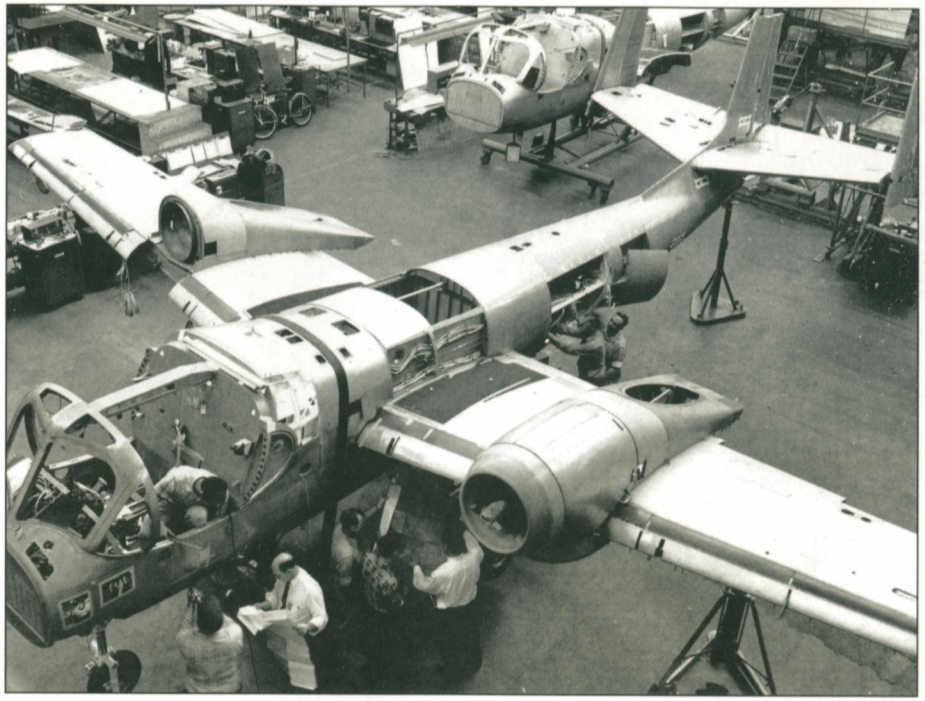
*(Front Cover)* An OV-1B equipped with the Side Looking Airborne Radar (SLAR) pod is in flight over Vietnam. The SLAR was mounted asymmetrically in an 18-foot pod under the starboard side of the forward fuselage.

*(Rear Cover)* The OV-1D Mohawk is more versatile than the earlier variants; 37 were built by Grumman. This OV-1D Mohawk's serial number is 66-156946.

*(Preceding Page)* OV-1D Mohawk, serial number 69-17004, comes in for a landing with all three landing gears fully extended. *(John A. Gourley III)*

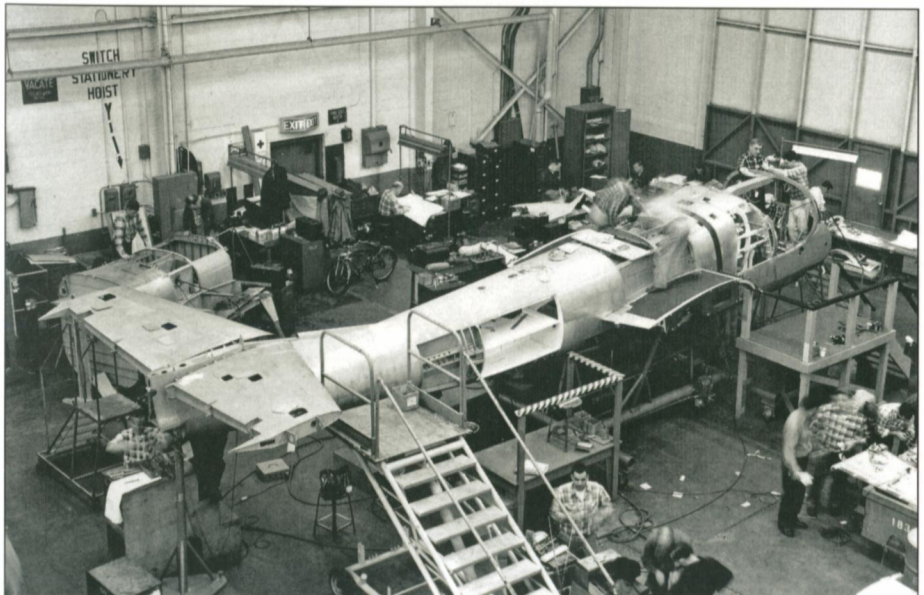


Grumman workers at the Bethpage plant assemble a YOV-1 aircraft in the late 1950s. Grumman was primarily a U.S. Navy aircraft manufacturer, so production of the U.S. Army Mohawk at its Bethpage plant was unique. *(Grumman archives via Cradle of Aviation)*

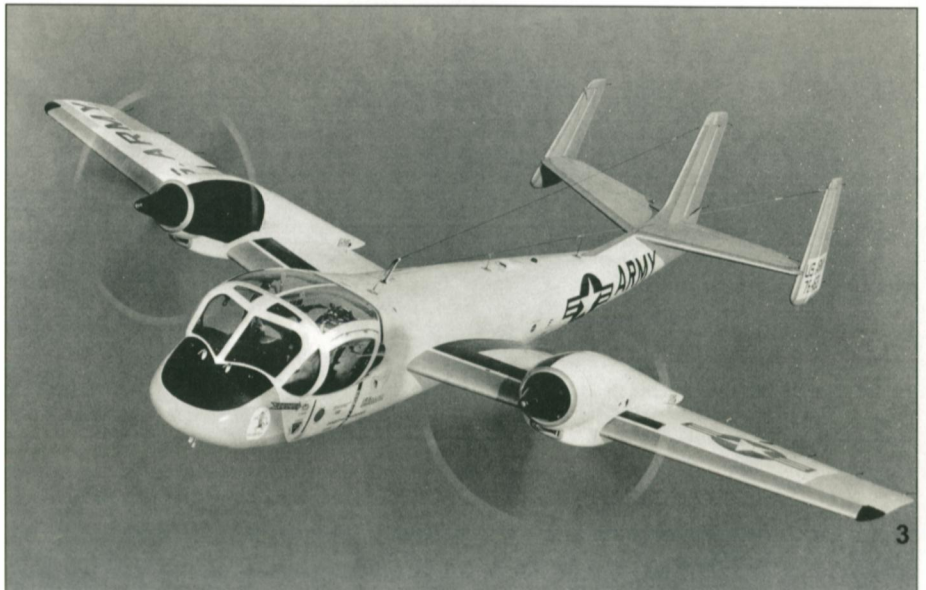


The eyebrow window frame in the cockpit and the rear-side window frame are two features associated with the YAO-1. Note the extended speed brake located before the tail. *(Grumman archives via Cradle of Aviation)*

The Grumman facility in Bethpage would be used to build nine preproduction YAO-1 aircraft and would be the site for future Mohawks production models. *(Grumman archives via Cradle of Aviation)*




The first YAO-1 aircraft was serial number 57-6463 and is shown here in flight during 1959. The production version of the aircraft would be designated by the U.S. Army as the OV-1A and named the Mohawk. *(Grumman archives via Cradle of* Aviation)



This restored OV-1B model Mohawk is on display at an air show. OV-1B aircraft are typically painted in the olive-drab brown color used by the U.S. Army. *(John A. Gourley III)*

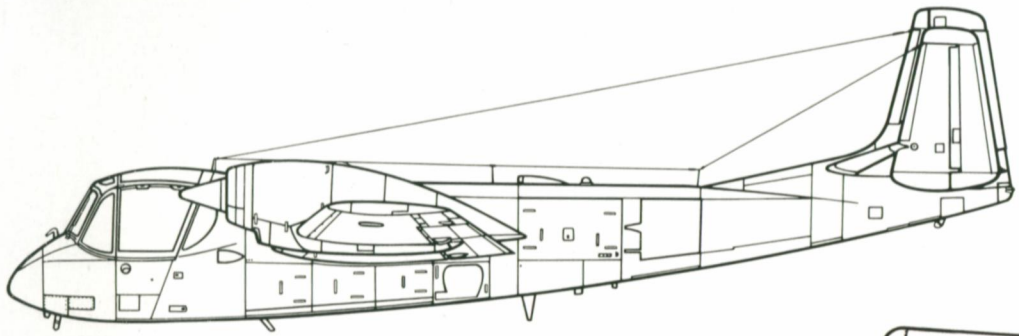
This restored OV-1D (67-18926) has been painted with scarlet red markings on the tail and fuselage, signifying it as a training aircraft. *(John A. Gourley III)*

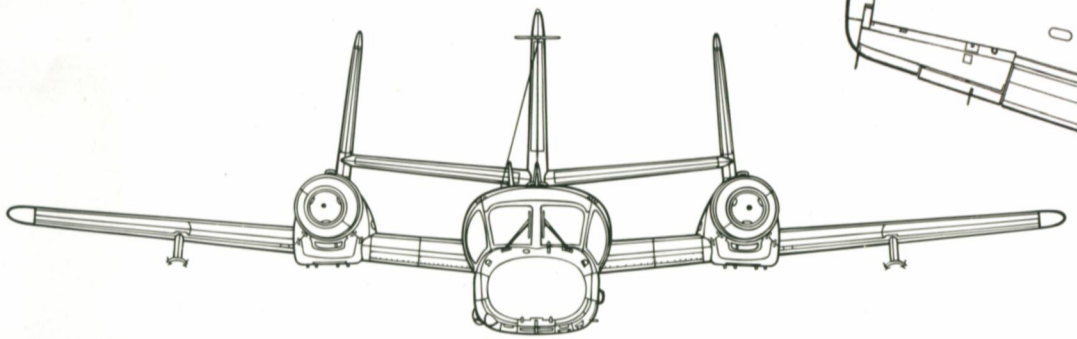
This restored OV-1D Mohawk that is civilian-owned is en route to an air show. In addition to the original U.S. Army serial number (68-15946) marking on the tail, the aircraft has civilian aircraft identification (N946AH) to comply with civil aviation requirements. *(Max Gauthier)*

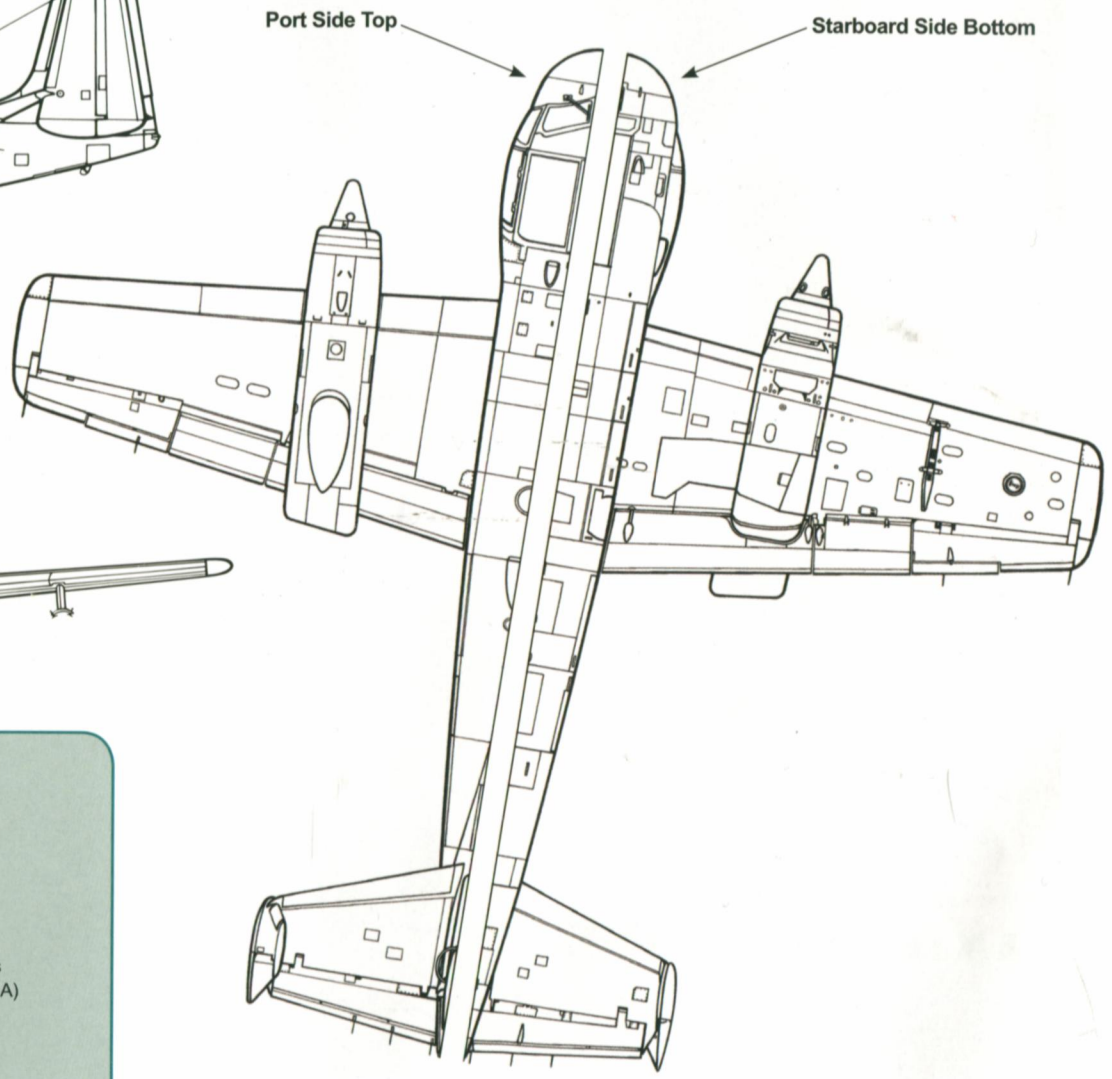
NASA had a modified OV-1B model aircraft (62-5880/N512NA) that was used to conduct noise studies on jet engines during the 1970s. A single jet engine was installed under the right wing with the Mohawk keeping the original turboprops. *(NASA via Cradle of Aviation)*

This OV-1D model Mohawk aircraft (68-15946) is one of several Mohawks that have been restored by Mohawk Industries of Lantana, Florida. It is painted in the ghost gray paint scheme that is used on other aircraft in similar roles, such as the A-10 Warthog, in order to give better masking against the sky. Currently, about 40 Mohawks are in flyable condition, most of them OV-1D models, with some operated by the Argentine Army Aviation as well as several being maintained in the United States by private owners. *(Ken Neubeck)*

# First Production Model OV-1 Mohawk





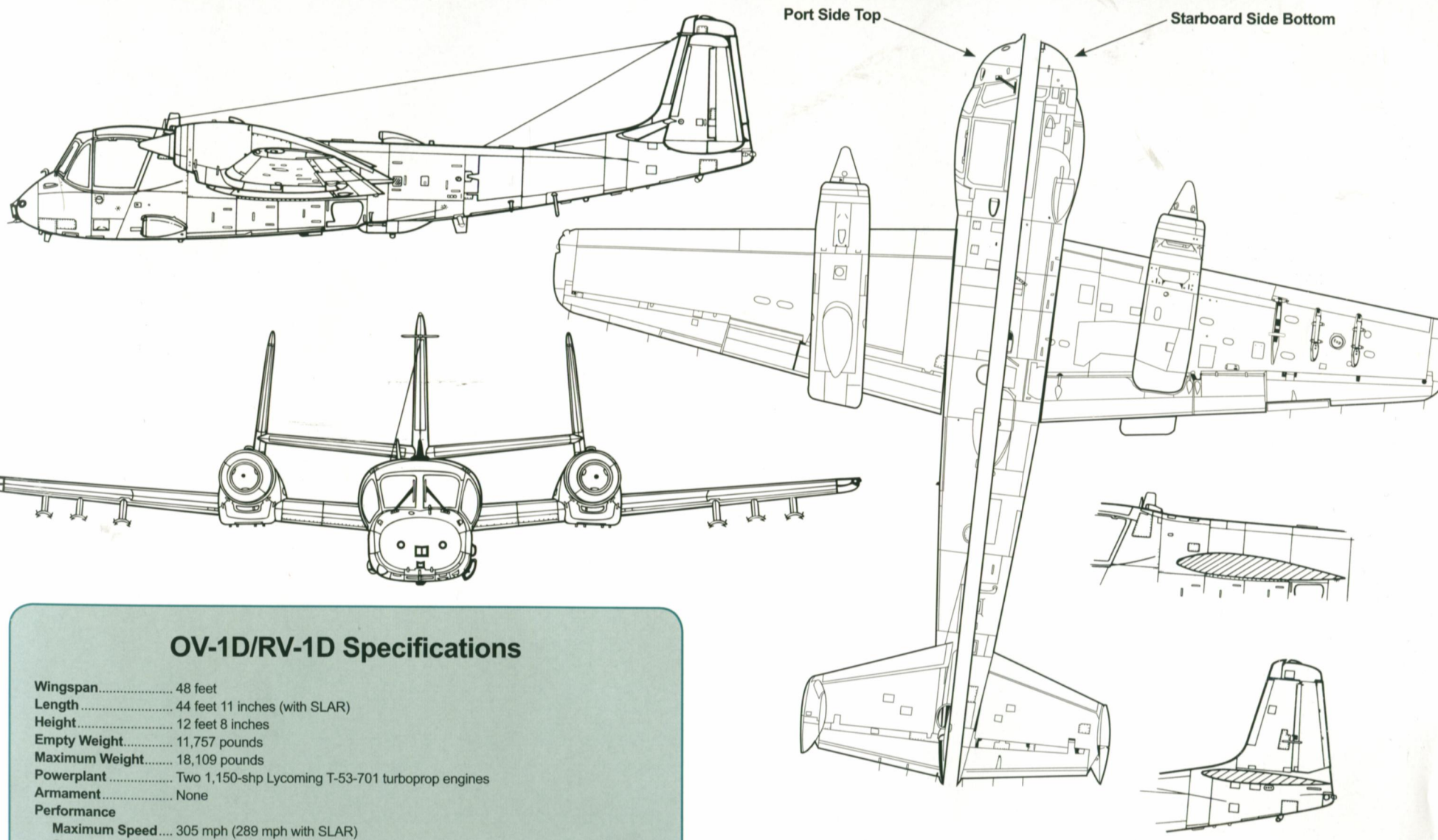



## OV-1A/JOV-1A Specifications

**Wingspan**..... 42 feet
**Length**..... 41 feet 1½ inches
**Height**..... 12 feet 8 inches
**Empty Weight**..... 11,023 pounds
**Maximum Weight**..... 15,020 pounds
**Powerplants**..... Two 1,050-shaft horsepower (shp) Lycoming T-53-L-7 turboprop engines
**Armament**..... Six underwing pylons capable of carrying gun and/or rocket pods (JOV-1A)
**Performance**
- **Maximum Speed**.... 297 mph
- **Service Ceiling**..... 25,000 feet
- **Range**..... 645 miles

**Crew**..... Two

# Last Production Model OV-1 Mohawk




## OV-1D/RV-1D Specifications

**Wingspan**..... 48 feet
**Length**..... 44 feet 11 inches (with SLAR)
**Height**..... 12 feet 8 inches
**Empty Weight**..... 11,757 pounds
**Maximum Weight**..... 18,109 pounds
**Powerplant**..... Two 1,150-shp Lycoming T-53-701 turboprop engines
**Armament**..... None
**Performance**
- **Maximum Speed**.... 305 mph (289 mph with SLAR)
- **Service Ceiling**..... 25,000 feet
- **Range**..... 1,011 miles

**Crew**..... Two

The OV-1A and OV-1B have similar front sections with the OV-1B having a Side Looking Airborne Radar (SLAR) unit attached to the lower portion of the fuselage. The air intake scoop located on the propeller line is for the heat exchanger and is only on the left side. *(Ken Neubeck)*

The SLAR is 18 feet long and is attached to the right side of the aircraft, and its length runs from the nose to midwing. *(Ken Neubeck)*

At the lower part of the nose section, two blade antennas are used for the IFF AN/APX-72 transponder system. *(Ken Neubeck)*

This OV-1B model aircraft is a display model that is kept in excellent condition and is located on the grounds of the Tobyhanna U.S. Army Depot. *(Ken Neubeck)*

The OV-1C model did not carry a SLAR unit. In addition, the front section of the OV-1C differed from the OV-1B model in that the ILS glide slope receiver antenna was added to the tip of the nose. This OV-1C aircraft (62-5856) is on display at the Wings of Eagles Discovery Center, Horseheads, New York. *(Ken Neubeck)*

This OV-1C Mohawk has the red and white shark's mouth markings that is associated with the 1st Infantry Division that served in Vietnam. *(Ken Neubeck)*

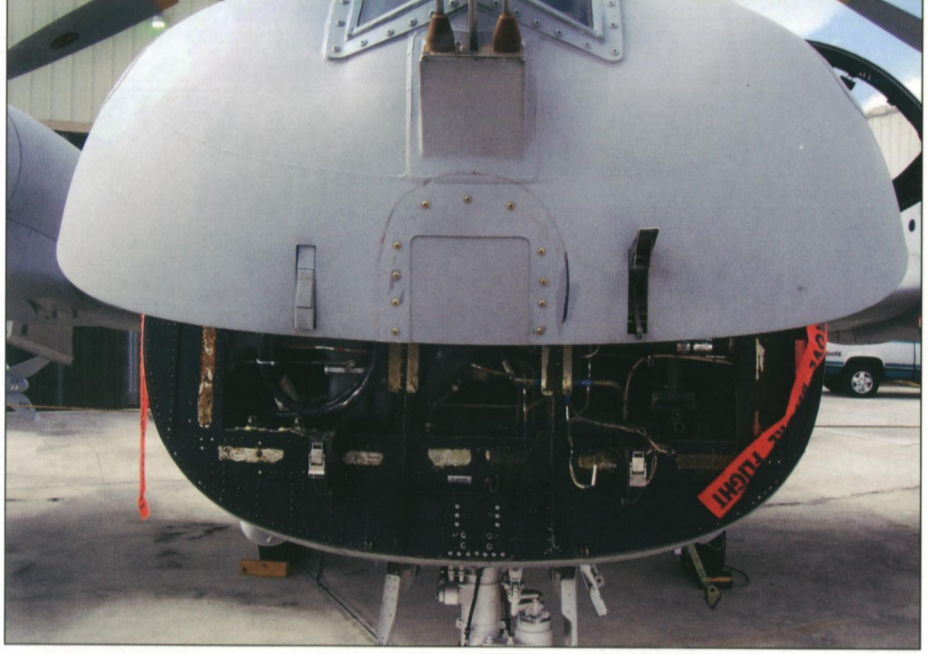
This is a left side view of the OV-1C model aircraft. The air intake scoop that is located below the rear cockpit window is the same size as the one on the OV-1B model, but this was changed in later Mohawk models. *(Ken Neubeck)*

Significant modifications would be made on the front of the nose section for the OV-1D model from the previous Mohawk models. Here, it can be seen that the nose section has been modified to accommodate a special window for the front camera. *(Ken Neubeck)*

The side view of the OV-1D cockpit shows that the air intake scoop has been enlarged from the previous Mohawk models. *(Ken Neubeck)*

This close-up view of the front nose section shows the two-section window modification for the panoramic camera addition to the OV-1D, located above the ILS glide slope receiver antenna. *(Ken Neubeck)*

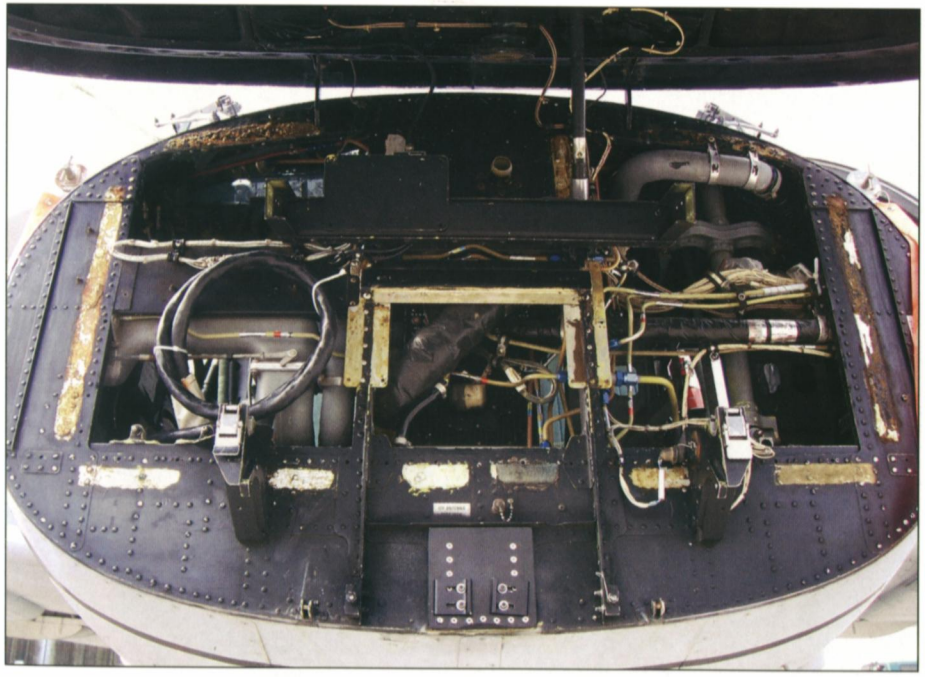
This is a close-up view of the ILS glide slope antenna that is connected to the AN/ARN-58 receiver and used for landing at airports. *(Ken Neubeck)*



Releasing the two quick-release latches located on the bottom of the structure and then lifting upward opens the front nose section of the OV-1D. *(Ken Neubeck)*

The oblique panoramic camera is located on the paneling below the nose cone. *(John A. Gourley III)*

This is the panel where the KA-60 camera is mounted, without the camera and the padding. Some of the wiring from the lower part of the cockpit is visible in this shot. *(Ken Neubeck)*

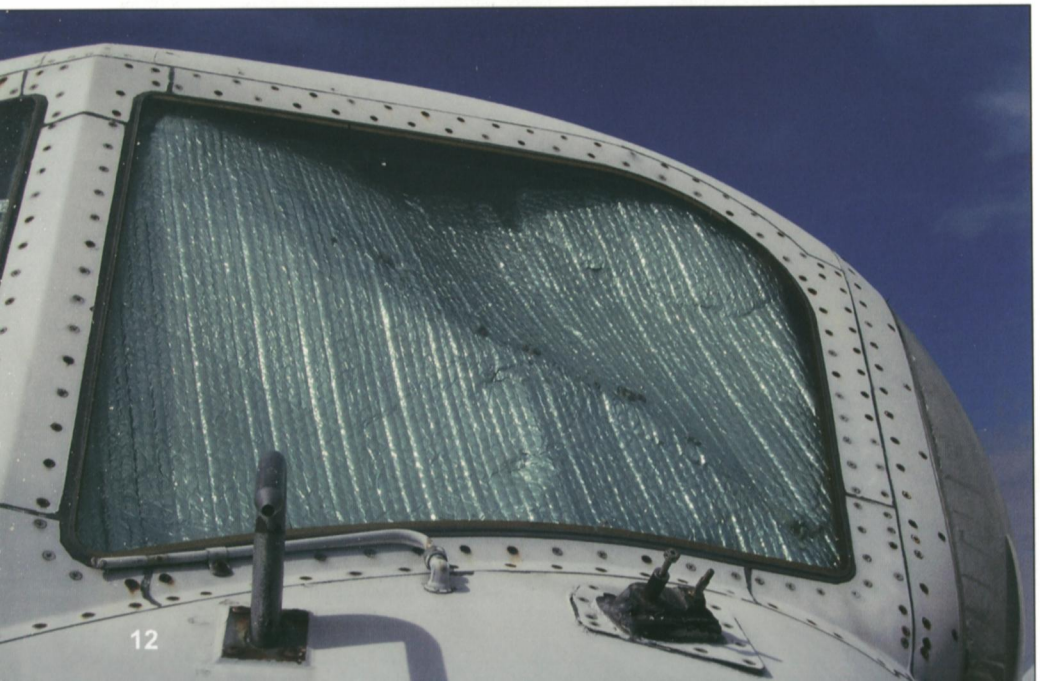


The cockpit consists of several windows: two on the top, two in the front, two small triangular convex windows, and two side convex windows. *(Ken Neubeck)*

The two front windows are made of 1-inch-thick bulletproof glass for protection from ground fire. The top two windows of the cockpit can be seen in this view. *(Ken Neubeck)*

The window arrangement and windshield wiper setup remained the same for all of the Mohawk models. This is an OV-1C Mohawk. *(Ken Neubeck)*

This particular OV-1D has the windshield wiper removed, revealing the base on which the wiper arm is mounted. Note the pitot static tube on the right side and the deicing line that lines the bottom of the window as well as the fastener pattern. (*Ken Neubeck)*

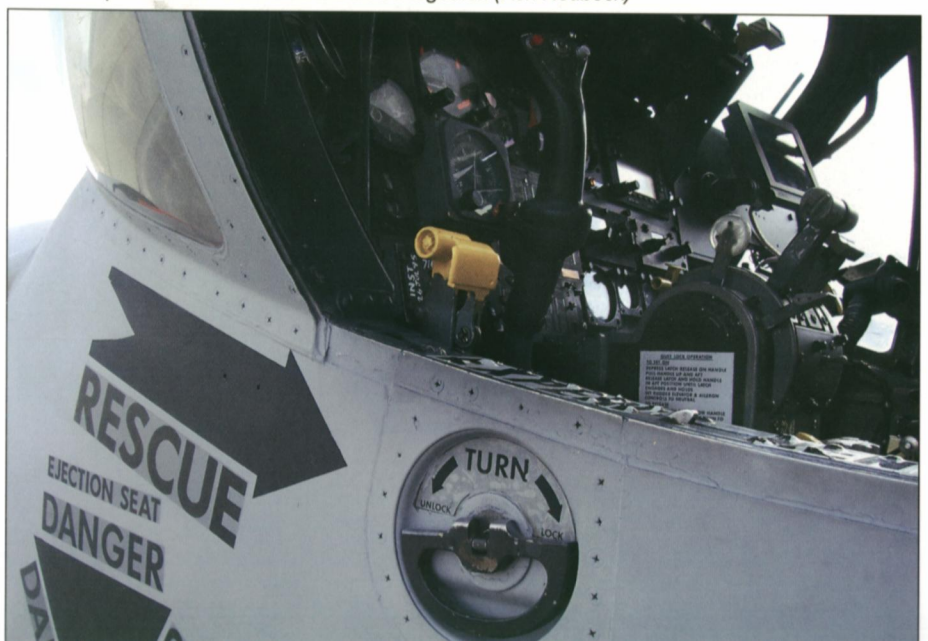


Moving toward the side of the OV-1 aircraft, a triangular window is followed by a convex window, which is where the pilot boards the aircraft. *(Ken Neubeck)*

This view of the right side of the front fuselage shows the various warning markings for the propeller, ejection seat, and exit release. Note the practice of having the crew chief's name painted on the nose landing gear door. *(Ken Neubeck)*

This view of the left side of the same aircraft (67-18924) shows identical markings that were on the right side. Note that the exit release handle is in the same area under the window as on the right side. *(Ken Neubeck)*

This is a close-up view of the exit release handle and the yellow internal release handle located nearby in the cockpit. These two handles are linked together. *(Ken Neubeck)*

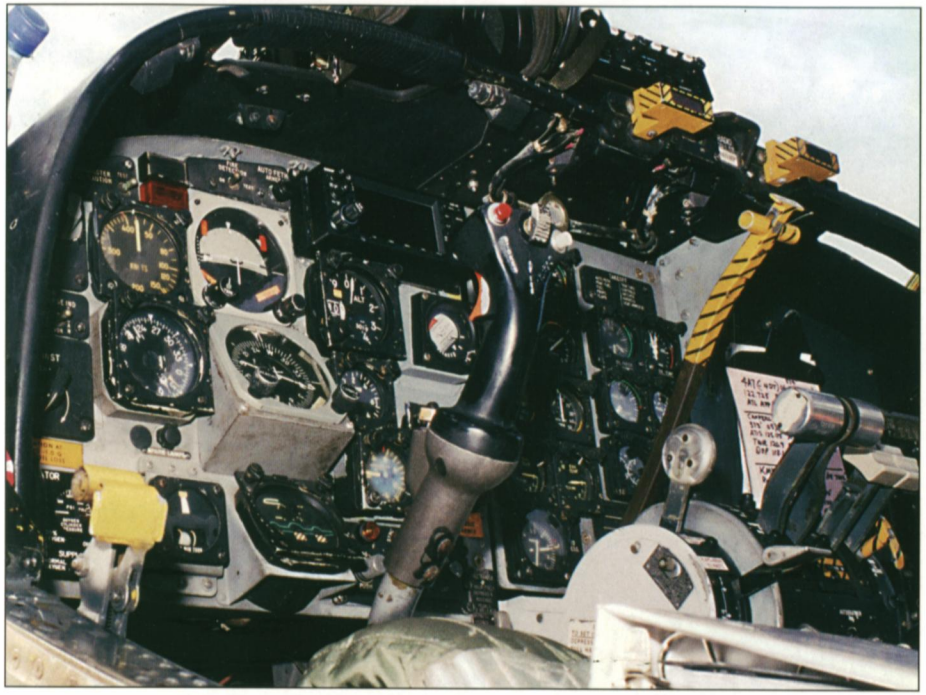



This is another view of the internal release handle in the closed position. A hook, located in front of the handle, comes out and engages with the window assembly. Also note that the outside handle is rotated as well. *(Ken Neubeck)*

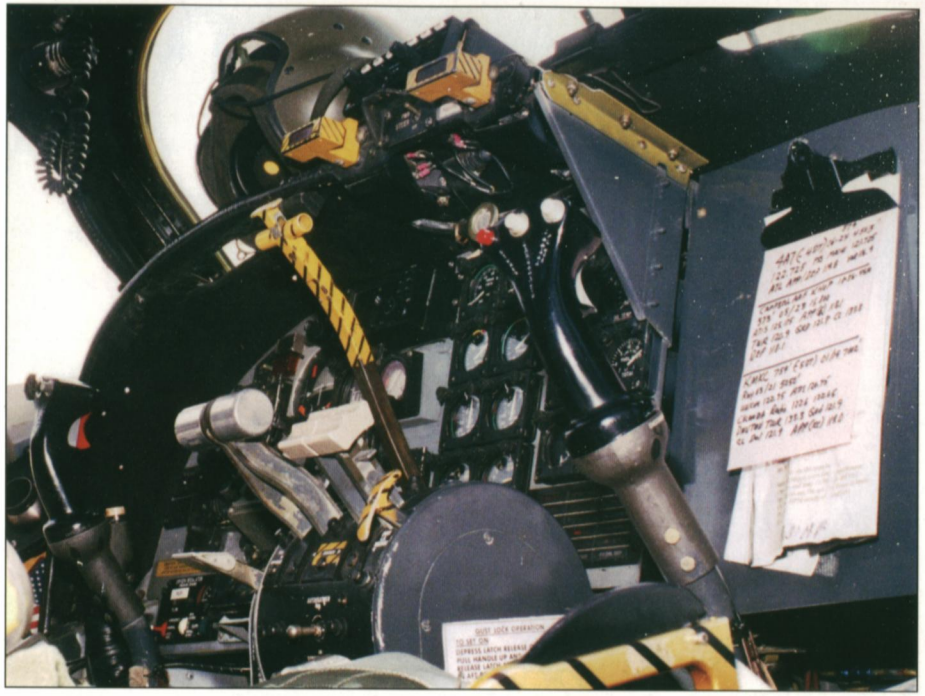
Boarding is accomplished by using the crew-boarding ladder assembly that is pulled out of an access slot that is located in front of the air intake scoop on the pilot side. There is a similar type ladder on the other side of the aircraft for the observer to climb into the aircraft. The air intake scoop is used for the heat exchanger and is located only on the pilot side of the aircraft. This scoop was redesigned for the OV-1D model shown above to be larger than those on the previous OV-1 models. *(Ken Neubeck)*

The side window on both the pilot and observer entrance is hinged at the top, and after the window is released it can be pushed upward for crew entrance. *(Ken Neubeck)*

This is a view of the pilot seat in a OV-1D aircraft. Note that the fire extinguisher is located on the outside of the rear wall. Also note the protruding circuit breaker panel that is located between the pilot and the observer that is unique to the D model version. *(Ken Neubeck)*

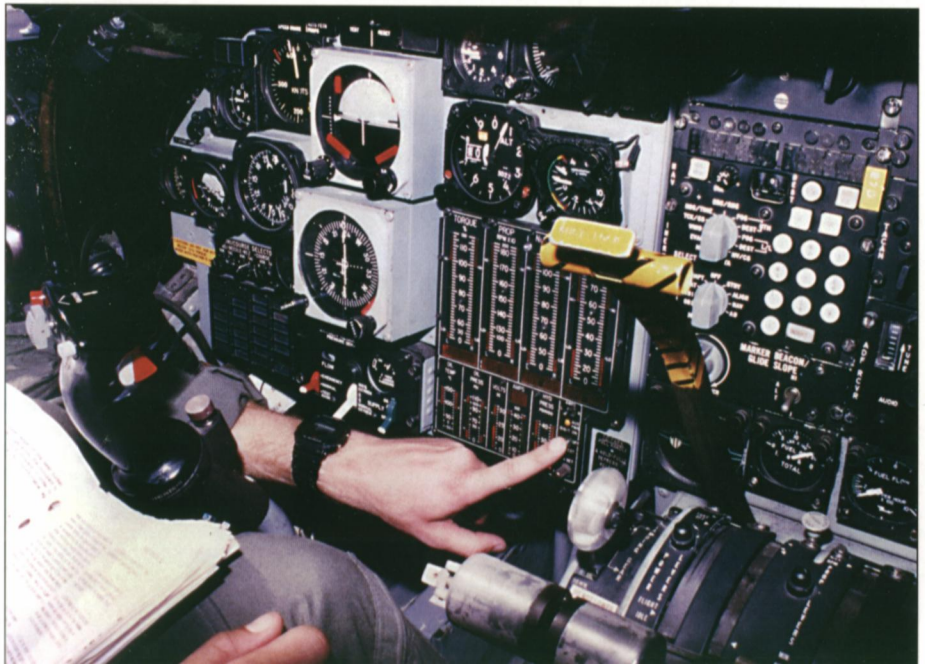


This is the view of the pilot side of an OV-1B cockpit. All flight-related gauges are round and are located in front of the pilot on the left side of the aircraft. *(John A. Gourley III)*



This is a view of the OV-1B cockpit from the observer side. This particular aircraft has been modified to include an additional flight control stick for the observer. *(John A. Gourley III)*

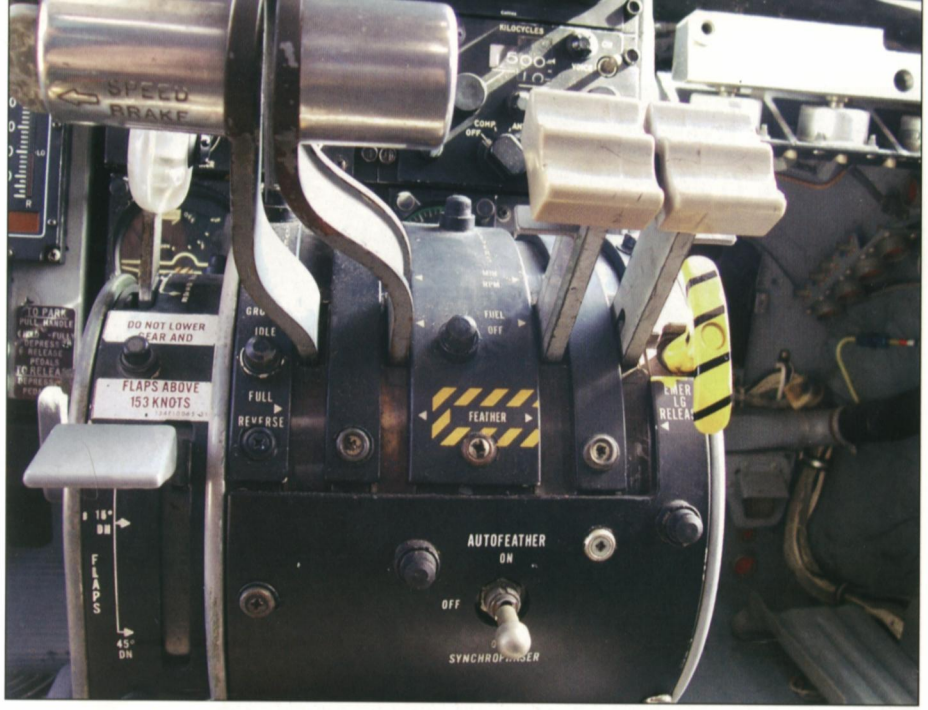
This is the pilot side of an OV-1D model cockpit. The pilot is pointing to a set of vertical indicators that are unique to the D model, replacing some round indicators. *(John A. Gourley III)*



This is another view of the OV-1D model cockpit. The vertical indicators are located on the panel directly above the right rudder pedal. *(Ken Neubeck)*

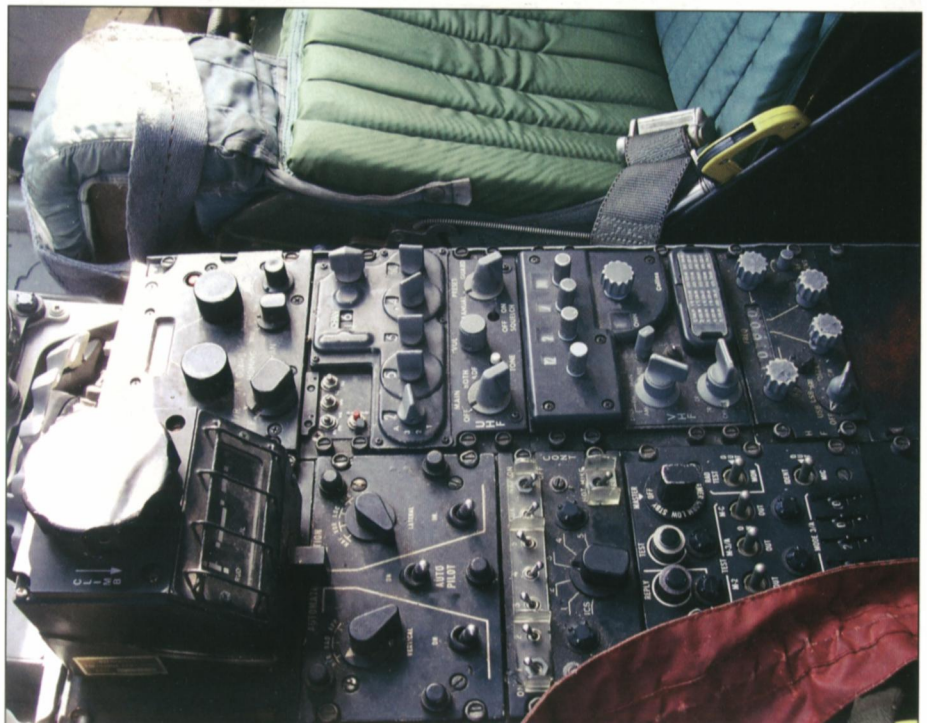
The throttle quadrant is located in the center of the cockpit at the pilot's right side. At the far left of the throttle console is a round knob for landing gear control, and below that is a flat knob for flap controls. The two large shiny knobs on the left of the throttle are for controlling the speed brake, and the two smaller knobs to the right of them are for fuel control. A series of controls, such as the auto-feathering switch panel, are located beneath the throttle quadrant. The round knob at the base is for controlling the rudder trim. The yellow and black handle at the base is for emergency stores release, and the yellow and black handle at the far right of the throttle is used for emergency landing gear release. *(Ken Neubeck)*

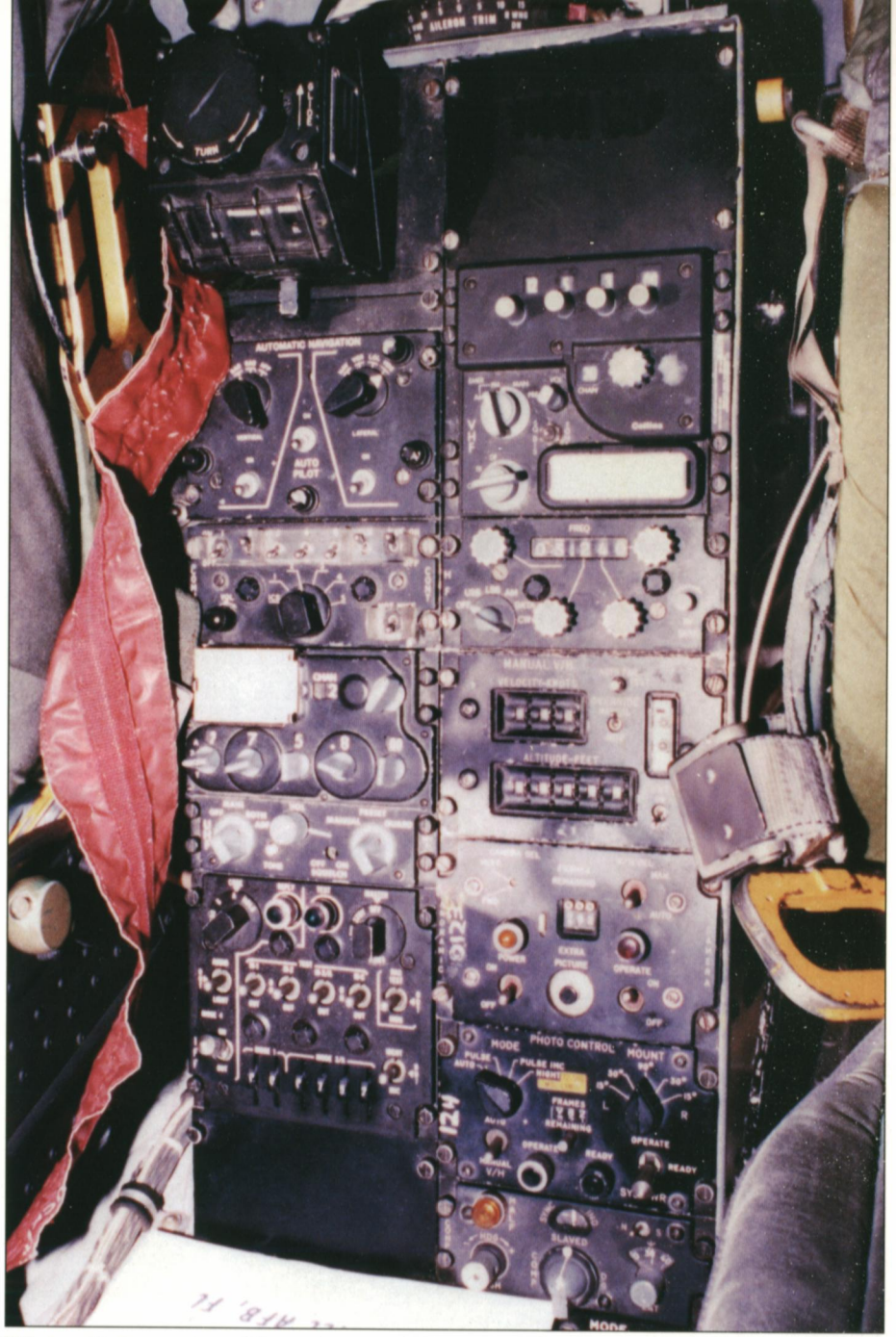
A series of control panels and gauges is located on the center console in front of the throttle controls. Gauges include the standard flight gauges and engine temperature gauges. The control panels include Tactical Air Navigation (TACAN), Automatic Direction Finder (ADF) receiver, marker beacon glide slope receiver, and VHF radio controls. The tall yellow and black handle lever is the built-in gust lock system. Controlled by a lever in the cockpit, the gust lock system blocks the throttles and immobilizes the rudders and elevators. The round silver knob at the top of the console on the far left is the on/off control for the windshield wipers. *(Ken Neubeck)*




This close-up view of the base of the throttle shows the switch for turning on auto-feathering of the propeller blades. *(Ken Neubeck)*

Located between the pilot's seat and the observer's seat is a series of control panels for the HF, VHF, and UHF radios, along with the autopilot control panel. *(Ken Neubeck)*

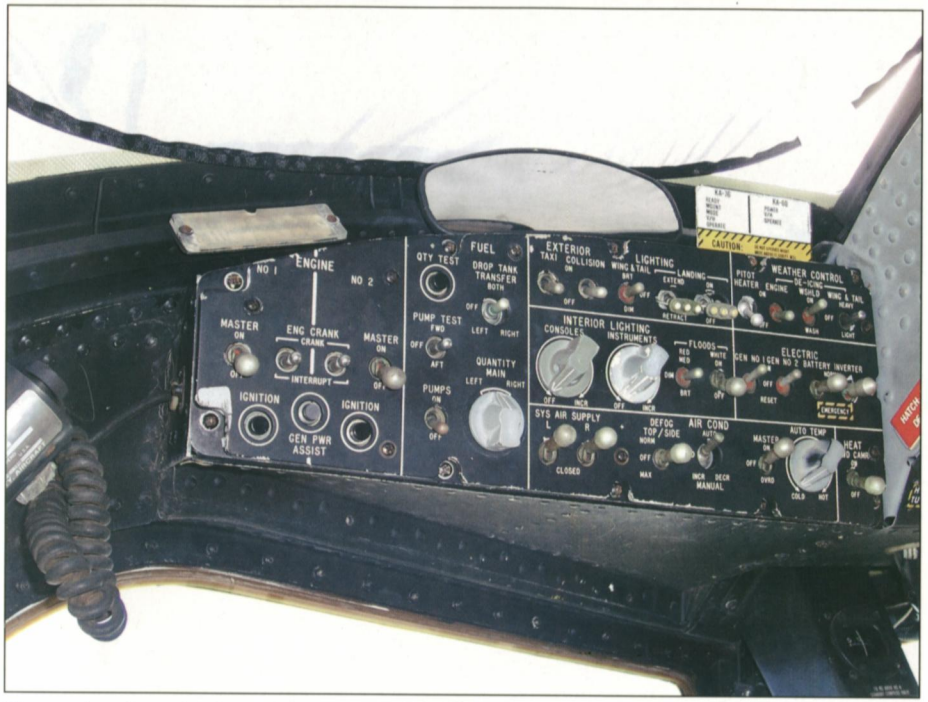





This is a bird's-eye view of the center console that is situated between the pilot and the observer. Controls for the HF, VHF, and UHF radios are located on the right side of the console, next to the observer seat. *(John A. Gourley III)*

This is a view of the pilot's control stick and the instruments that are located immediately in front of the stick for an OV-1D model aircraft. The stick and most of the instruments for the pilot would be consistent throughout the different Mohawk models with changes to some of the gauges, ranging from round to vertical style. *(Ken Neubeck)*

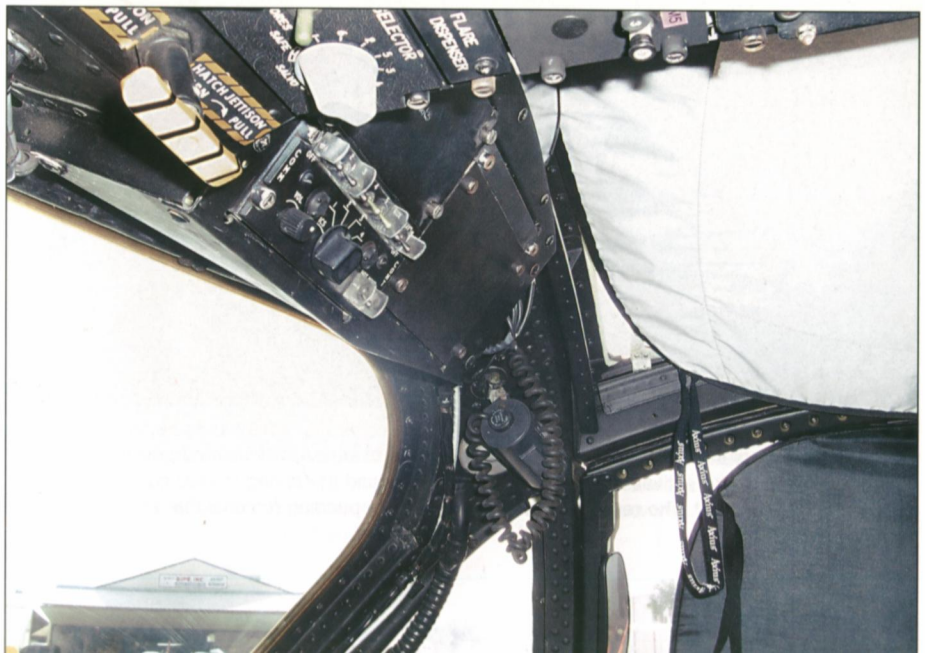
This close-up view of the pilot's control stick shows the release button for the stores and two buttons for camera control. Directly in front of the stick is the oxygen regulator panel. The cockpit floor is a ¼-inch-thick aluminum alloy plate that provides protection against small-arms fire. *(Ken Neubeck)*



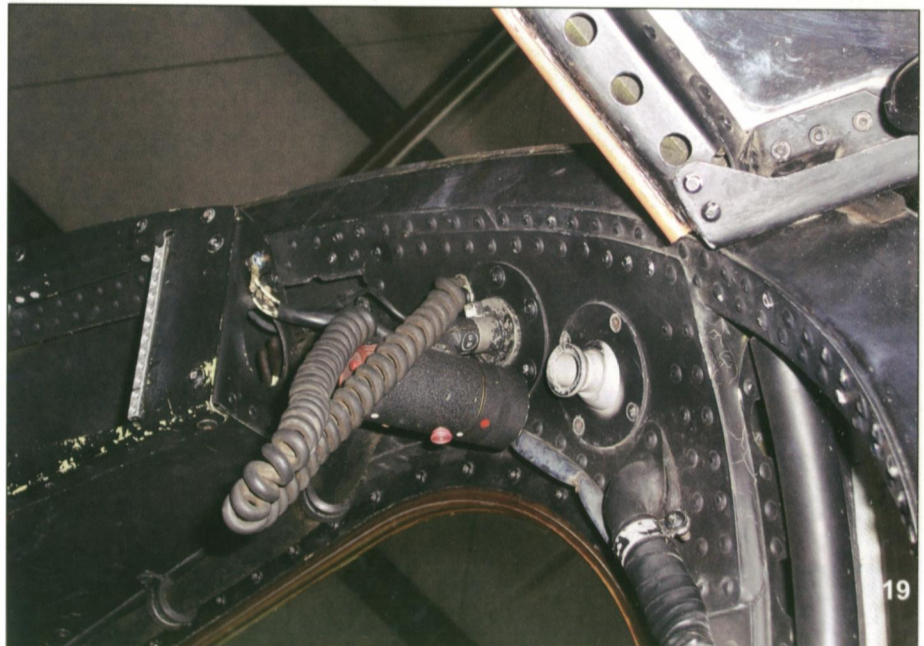

The overhead panel in front of the pilot contains fuel and engine controls, along with control switches for interior and exterior lighting. *(Ken Neubeck)*

In front of the base of the control stick and located on the pilot side are the two rudder control foot pedals that are made from metal castings. *(Ken Neubeck)*

A few controls are located on the overhead panel in front of the observer, such as the hatch jettison control. The map reading light is located in the corner. *(Ken Neubeck)*

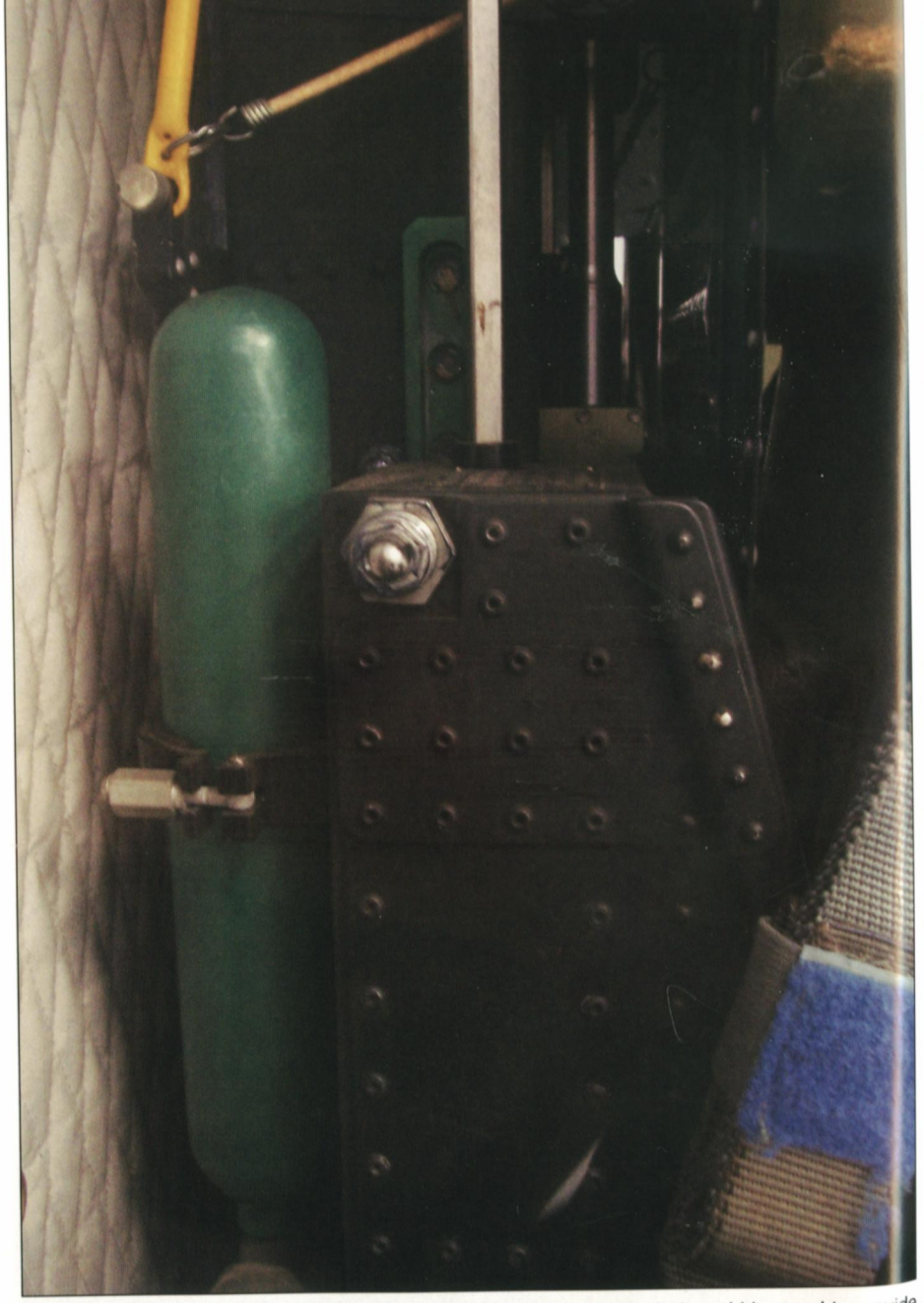



This is a close-up view of the map reading light, along with the coiled wire that allows maximum flexibility inside the cockpit. *(Ken Neubeck)*



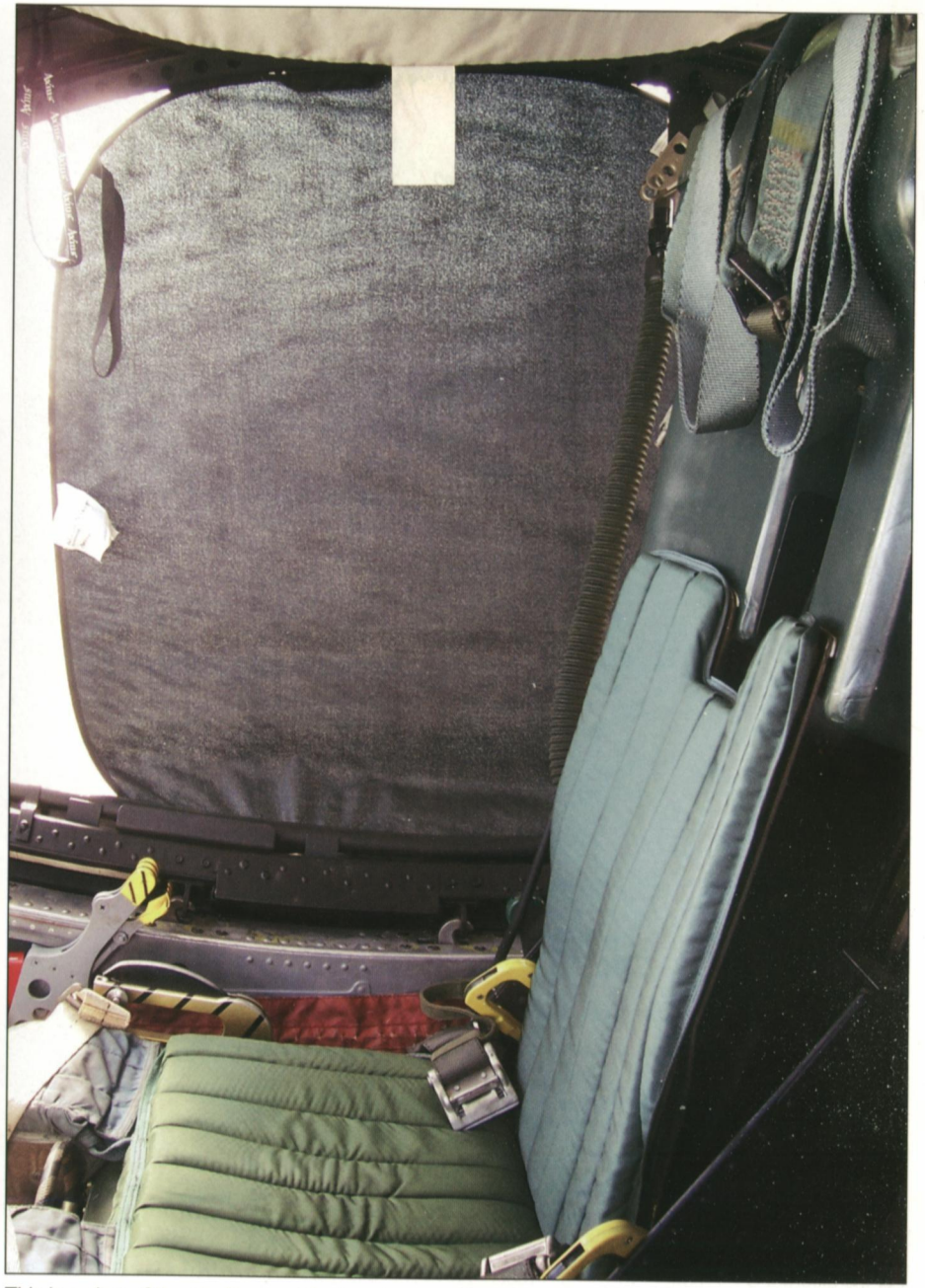
This is a view of the ejection seats of an OV-1B aircraft. The setup is identical to that of the OV-1D aircraft with some color differences of the seat material. *(John A. Gourley III)*

Located at the top of each ejection seat is a flexible handle that a crewmember would grab to initiate the ejection seat sequence as well as to pull down the face curtain. *(Ken Neubeck)*

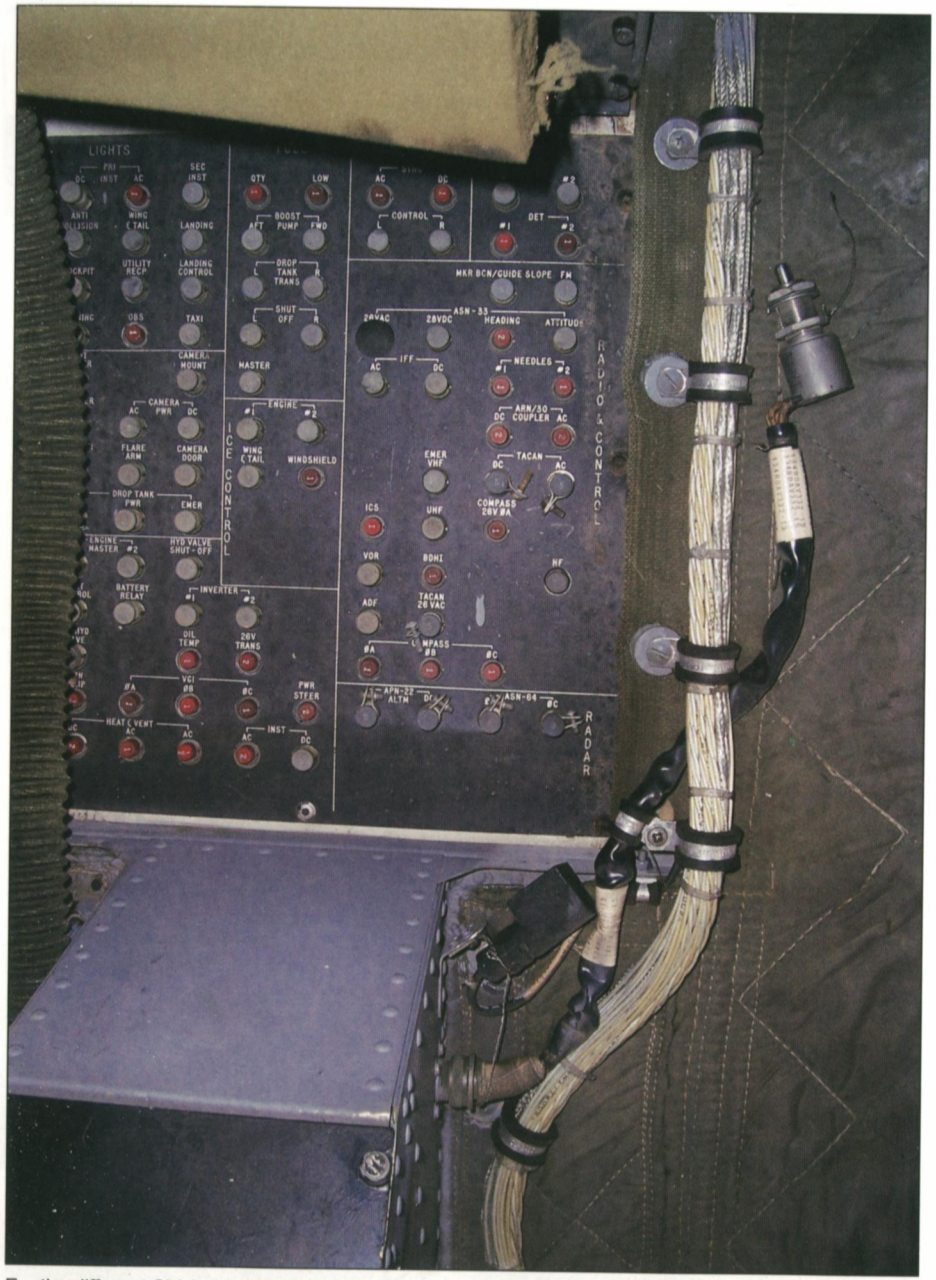


Behind each Martin-Baker ejection seat is a small green metal bottle that would be used to provide oxygen to the crewmember during ejection sequence and other in-flight emergencies. Note the rod that is linked to the activation pin on top of the bottle and the spring-loaded cable linkage that goes to the ejection seat. The rear wall is covered by a cloth padding material that snaps into place. *(Ken Neubeck)*

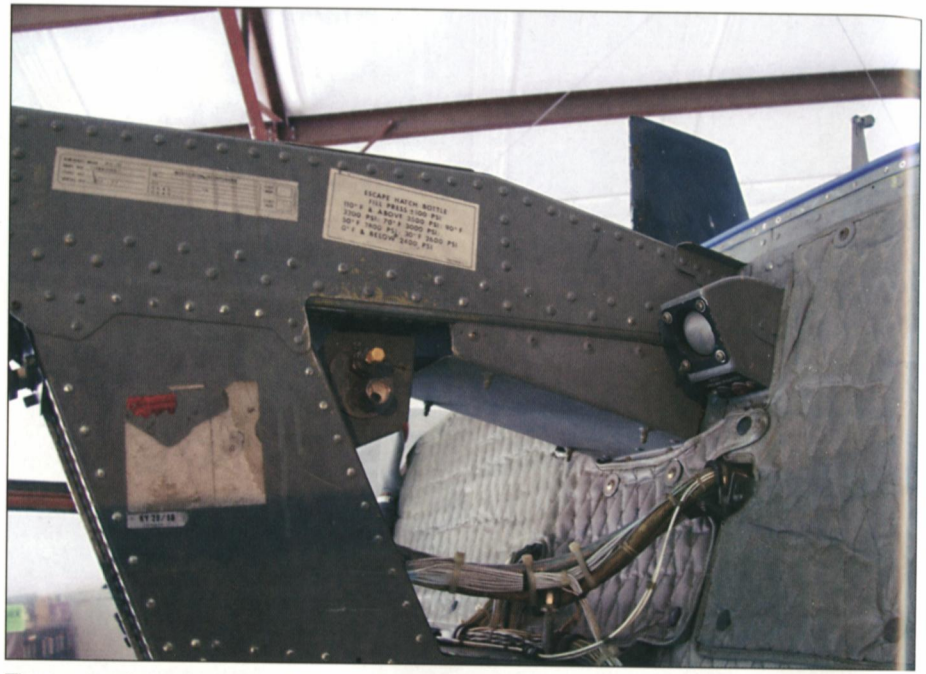
This is a close-up view in an OV-1D aircraft of the top portion of the Martin-Baker ejection seat for the observer. The cushion material on the seat is made of leather-covered foam and is dark green. Restraining belts are also green. *(Ken Neubeck)*



This is a view of the ejection seat for the observer. Note the olive-green seat cushion and the various emergency handles located around the seat for initiating the ejection sequence or for quick release of the restraints. *(Ken Neubeck)*




For the different OV-1 models, the circuit breaker panel was located in different parts of the cockpit. For the OV-1B aircraft shown above, the circuit breaker panel is located between the pilot and observer. For the later OV-1D model, it would be located in the overhead structure. Note that the lettering of the panel is upside down for better reading capability by the pilot while seated. *(Ken Neubeck)*



The overhead structure located between the pilot and observer is shown here for this OV-1D aircraft. Note the cabin light that is located at the top of the padded wall. *(Ken Neubeck)*

In this OV-1D model aircraft, the circuit breaker panel has been relocated to the extended overhead structure that is situated between the pilot and observer. This change aided in better reading of the circuit breakers by the crew and ground maintenance, compared to the panel's location in the OV-1B (refer to the photo on the left). *(Ken Neubeck)*

A production OV-1C aircraft comes off the production line in the Grumman facility in Florida. This aircraft is fully equipped with the AN/AAS-14 infrared detecting set with the control and indicator group in front of the observer position. Equipment for the observer position would change throughout the different Mohawk models and depending on what type of photographic or surveillance equipment would be required for the specific mission. *(Grumman archives via Cradle of Aviation)*

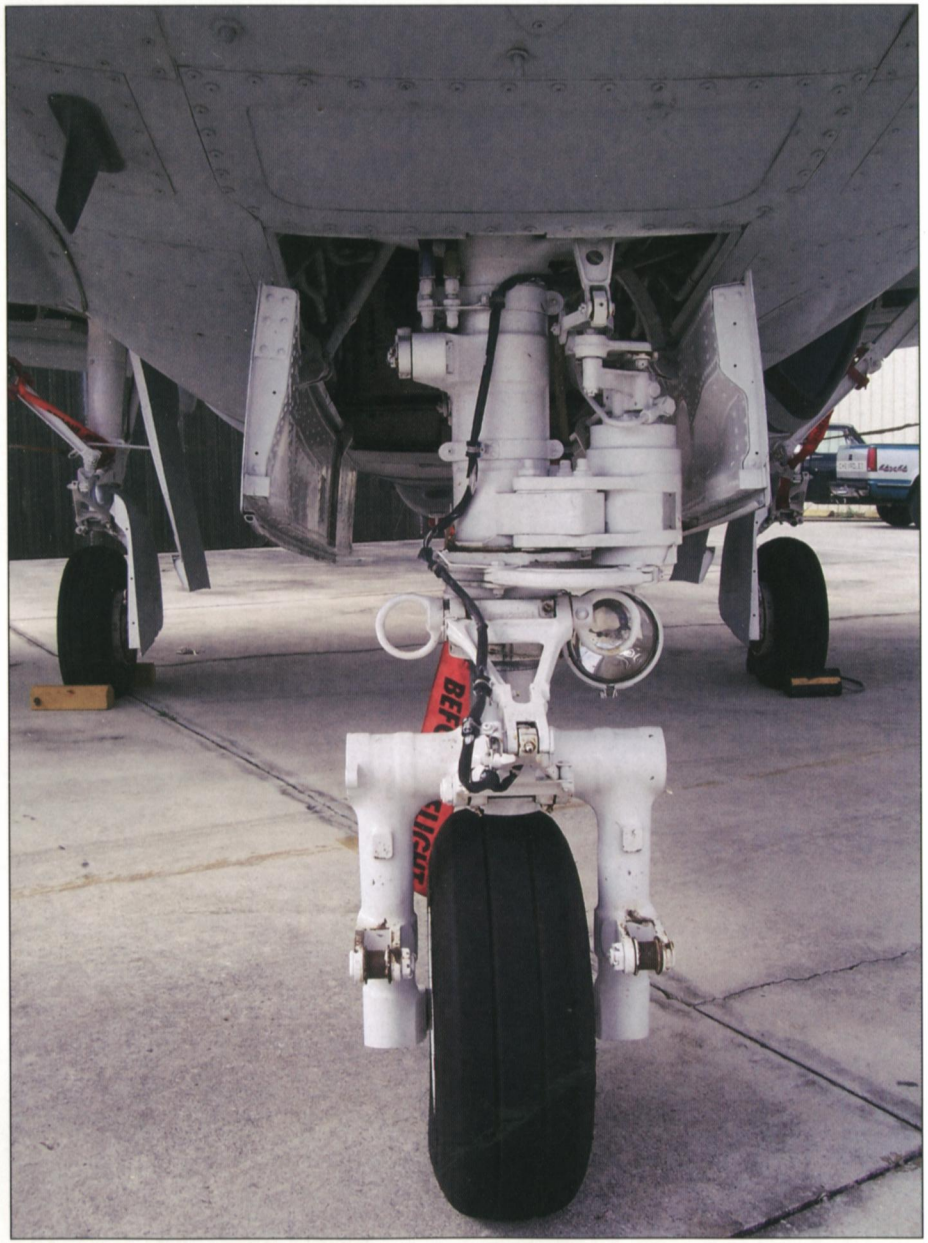
The Martin-Baker ejection seat that is used in the Mohawk is a module unit, and it can be removed from the aircraft by maintenance personnel for servicing. This particular seat is part of an OV-1B exhibit that is being restored by the Cradle of Aviation Museum located in Mitchel Field, Long Island, New York. *(Ken Neubeck)*

The rear of the ejection seat contains the seat rails that ride on the aircraft rails when the seat is ejected from the aircraft. The top of the seat is capable of breaking the glass of the canopy during ejection. The green bottle on the lower right side is the emergency oxygen bottle that would be used by the crew member during ejection. *(Ken Neubeck)*

The ejection seat used in the Mohawk consists of numerous components, including linkages, tubing, adjustment knobs, and explosive devices. The linkage on the side of the seat is used for turning on the emergency oxygen system during the ejection seat sequence of the crew member. *(Ken Neubeck)*

In this view of the top of the ejection seat from the left side, the material packed into the top of the seat is the face curtain that is pulled down during ejection. *(Ken Neubeck)*

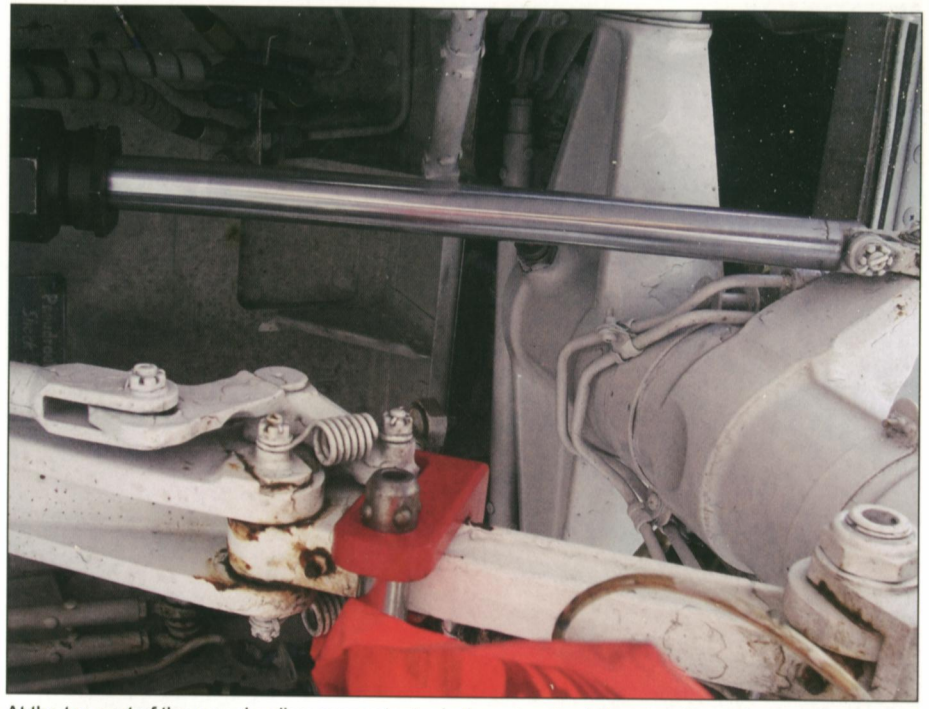
Looking at the top of the seat from the left side, various warning labels to maintenance personnel are posted regarding explosive components that are used in the seat and the requirement that personnel must be specially trained for ejection seat servicing. *(Ken Neubeck)*



In this view, all three landing gears can be seen, with the nose landing gear in the front and the left and right main landing gears located behind it. Both main landing gears are located close to the fuselage. The tires used on the Mohawk are low-pressure tires for better landing on rough runways. Note that the nose landing gear has two door panels that are each located on the side of the nose landing gear strut assembly and are linked into the fuselage by retraction mechanisms. *(Ken Neubeck)*

This close-up view of the nose landing gear shows the large fork structure that straddles the wheel assembly. The hydraulic components located on top of the fork are the components for the nose wheel steering. The taxi light for the nose landing gear is located on the left side of the strut, just behind one of the tow rings. Note the two brackets that extend in front of each side of the fork. These are used for tie-down of the Mohawk. *(Ken Neubeck)*

This side view of the nose landing gear shows the wheel assembly and how it is straddled by the fork structure. Note the extended structure on the fork that is used for tie-down. Also see the tow note that is posted on the door section, just above the tow rings. The hydraulic lines and linkage of the nose wheel steering unit are located on top of the fork and are extending forward. Part of the round shaft that rides inside of the actuator can be seen just above the fork structure. *(Ken Neubeck)*



At the top part of the nose landing gear actuator is the retraction linkage and actuator arm that is used to pull the nose landing gear back into the fuselage during flight. *(Ken Neubeck)*

This is a view of the rear of the nose landing gear wheel well where the nose landing gear will rest when it is retracted. *(Ken Neubeck)*

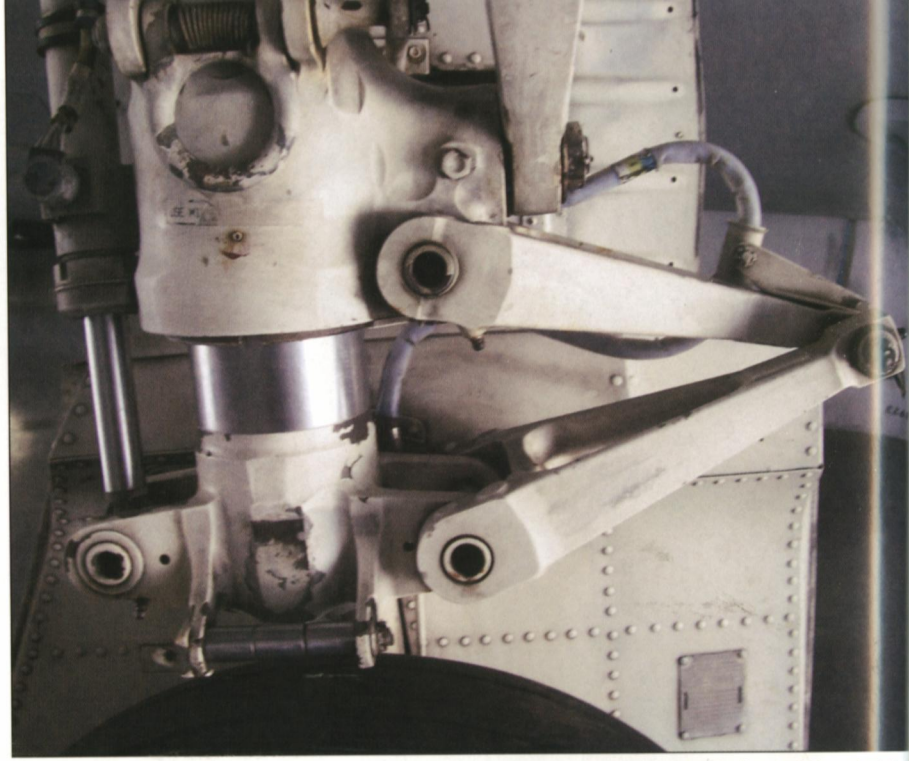
This is a side view of the right main landing gear assembly with chocks holding it in place. The assembly consists of a large strut with a shaft that rides inside of it. At the top of the gear is the retraction linkage and hydraulic actuator. The two door sections located on the inside of the gear can be seen, and when the gear is retracted during flight these will be flush with the wing. *(Ken Neubeck)*

This is a close-up view of the wheel and tire of the main landing gear, along with a view of the main landing gear actuator. Tires were typically made by Goodyear, with the recommended tire pressure for the main landing gears and nose landing gear set around 100 pounds per square inch (PSI). The linkage on front of the gear is the scissors assembly that aids in the extension of the shaft. *(Ken Neubeck)*

The rear view of the right main landing gear assembly shows the arrangement of the two door sections that are attached to the gear assembly as well as the retraction linkage that is attached to the strut at midlevel. It can be seen that the longer door panel will fit over the shorter door panel when the gear is fully retracted into the wing section of the Mohawk. *(Ken Neubeck)*

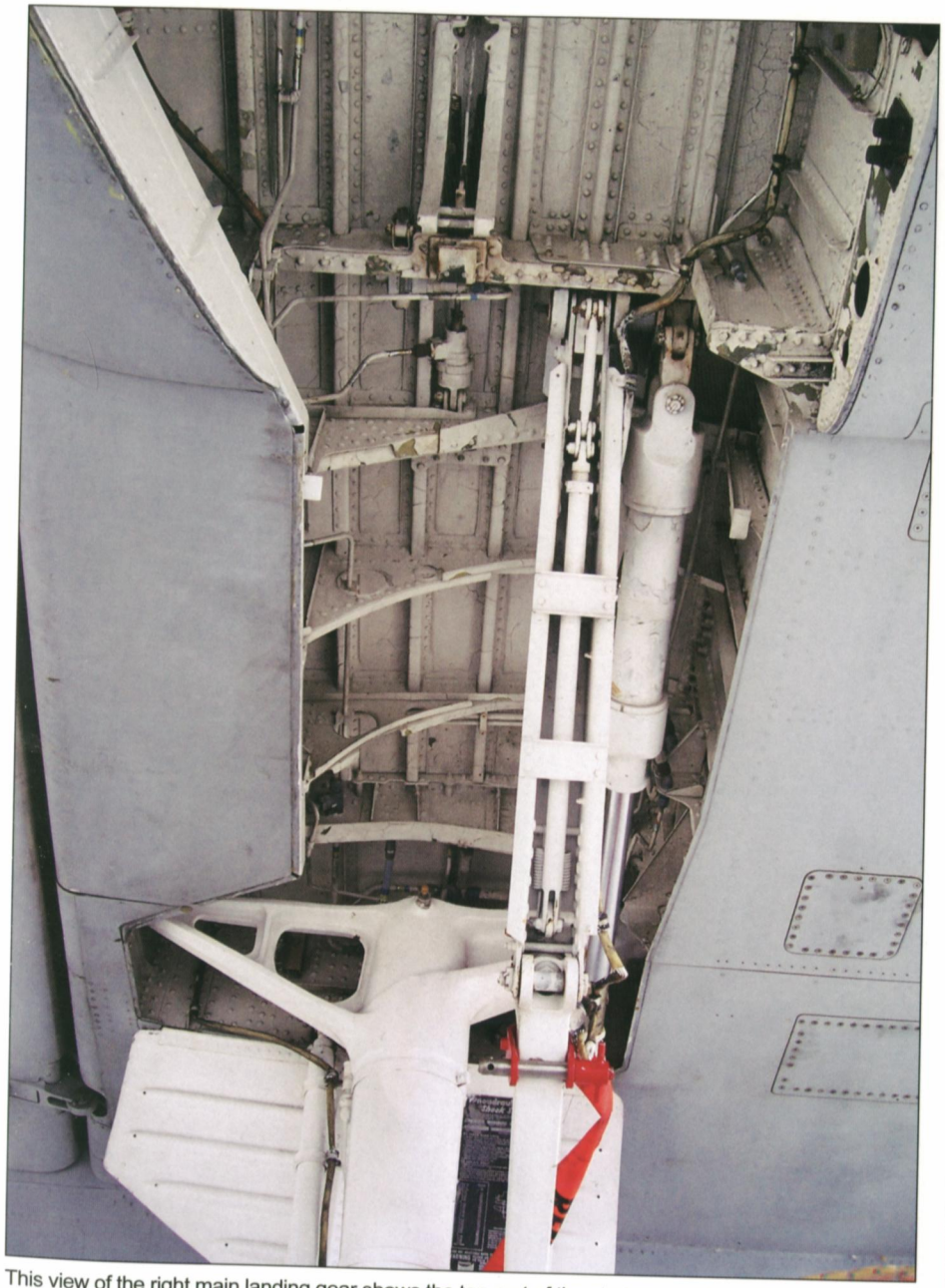
This close-up view of the right main landing gear shows the strut and linkage attached to one section of the landing gear door panel. The tire pressure of 100 PSI is posted on the actuator. Note the significant number of fasteners used on the door panel that aid in the sturdy construction of the Mohawk. *(Ken Neubeck)*

This is an overall view of the top portion of the right main landing gear, showing the strut, the internal shaft, along with the linkages attached to the shaft. Note the small bracket assembly that extends outward from the strut. This is indicated as a tie-down point. *(Ken Neubeck)*

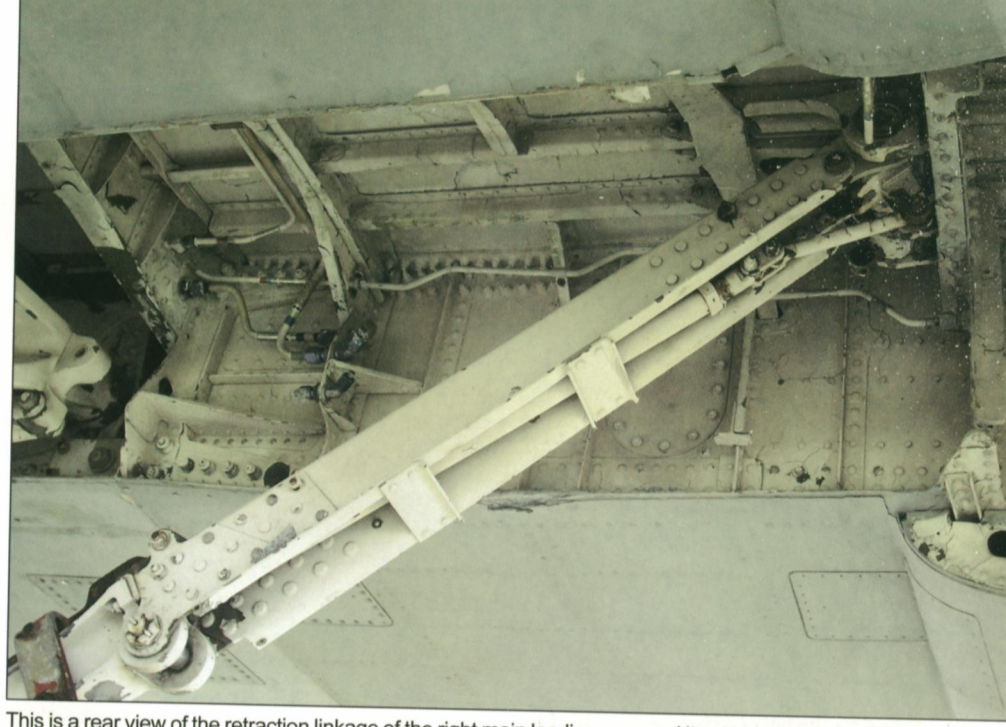


Each main landing gear has a scissors assembly mechanism that is located in front of the strut tha allows the main landing gear to extend slightly downward after it is deployed. *(Ken Neubeck)*

This is a close-up view of the top portion of the main landing gear strut and how it is situated inside the wing. *(Ken Neubeck)*



This view of the right main landing gear shows the top part of the strut assembly and how it is situated inside the wing. This view shows how the retraction linkage and actuator that is attached to the strut is attached to a fairing inside the wing panel. The left main landing gear assembly is symmetrical to the right main landing gear assembly with the same components. *(Ken Neubeck)*



This is a rear view of the retraction linkage of the right main landing gear and its attachment point inside of the wing. *(Ken Neubeck)*

For both main landing gears, there is a door panel that is located on the outboard wing side that closes after landing gear retraction via spring mechanisms. *(Ken Neubeck)*

This front view of the top of this restored OV-1D aircraft shows the three-fin tail section in relation to the wing and the two engines. Also, a number of air inlet scoops for equipment and cockpit cooling can be seen on the top part of the fuselage. Note that black paint is used as trim over the basic light paint scheme for the front part of the tail section and for sections of the wing and fuselage. *(Ken Neubeck)*

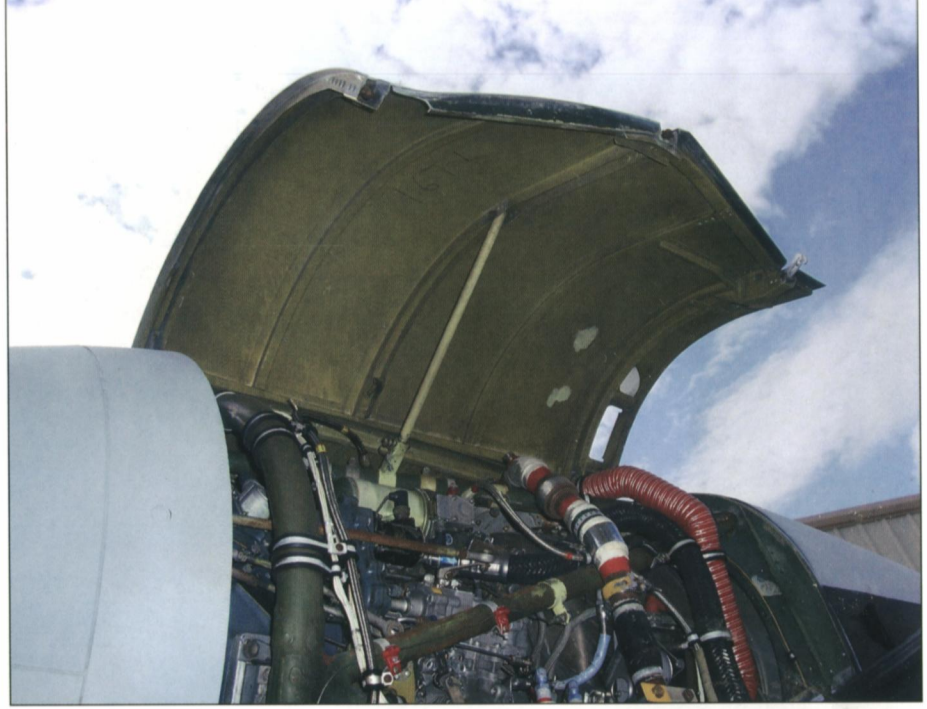
This close-up view of the top of the aircraft shows the air scoop behind the pilot side of the cockpit, along with another scoop located at midfuselage. Note the white extrusion that is located on the top of the cockpit, between the four windows. This is where the fixed HF antenna would normally be routed, going to each of the two tail sections. *(Ken Neubeck)*

Each Mohawk aircraft has two engine nacelle assemblies that are located outboard from the main landing gear. The engines are Lycoming model T53-L-701 engines for this OV-1D aircraft. The engine drives a three-bladed propeller that is manufactured by Hamilton Standard. Below the hub of the propeller is an oblong inlet port, the inlet for the oil cooler. *(Ken Neubeck)*

This is a close-up view of the oil cooler intake section on the lower part of the engine nacelle. *(Ken Neubeck)*

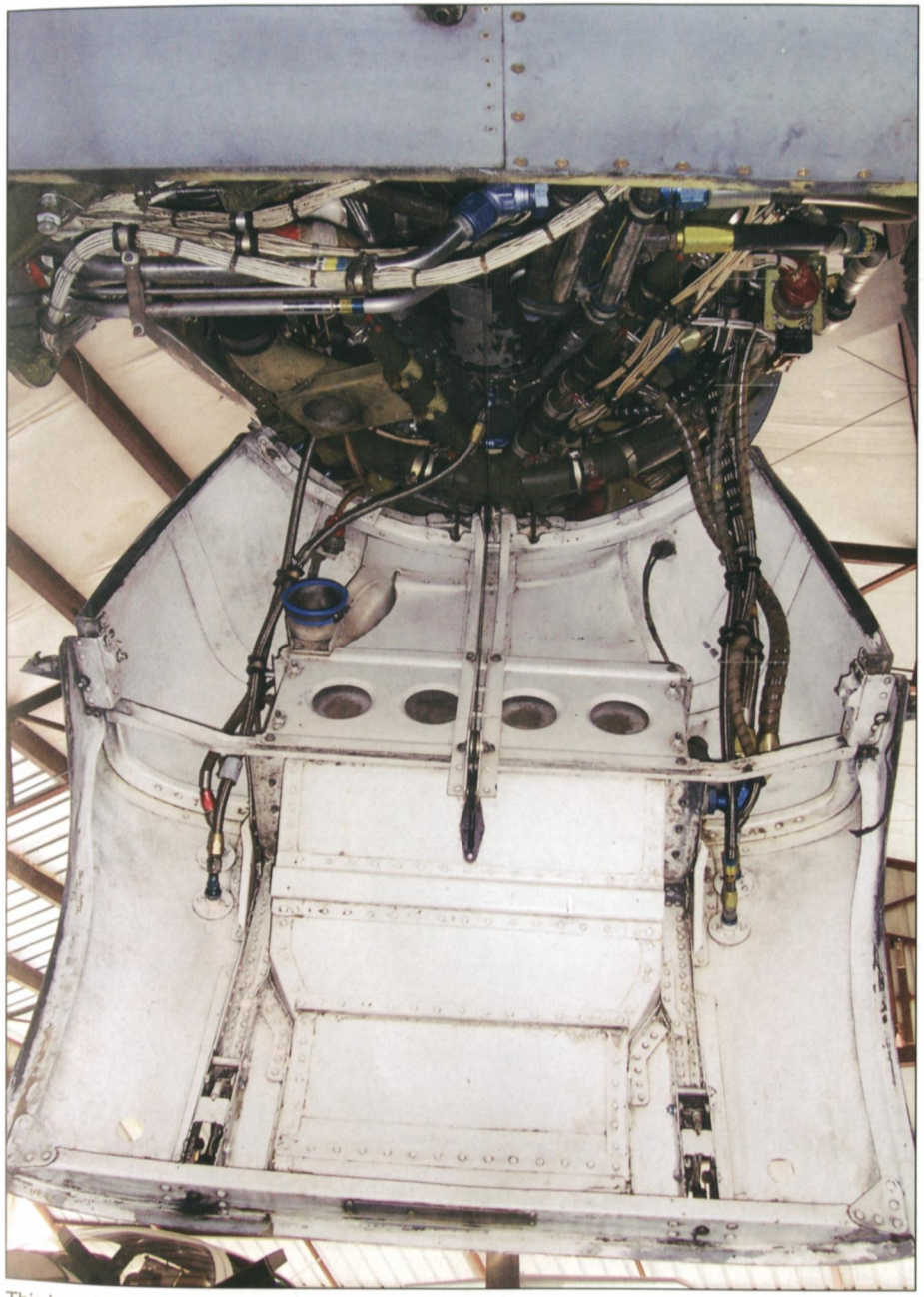
Access to both engines is done through the use of quick-release latches that are located at the middle of the nacelle section, behind the propeller. *(Ken Neubeck)*

This is a view of the outboard side of the left engine with both the top and bottom access doors opened. A number of lines and accessories for the Lycoming T53-L-701A turboprop engine can be accessed through these doors. *(Ken Neubeck)*

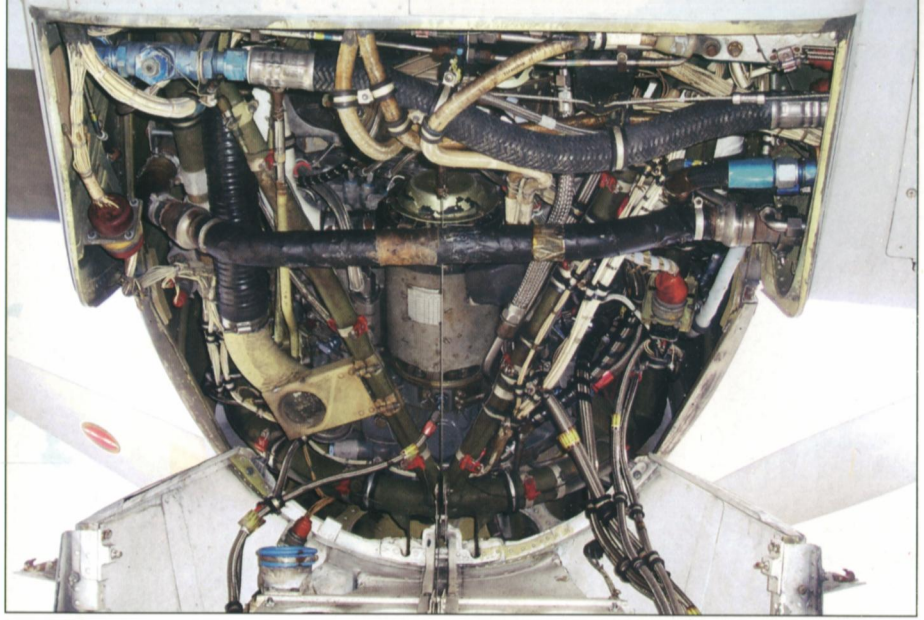


A rod holds up the top access door. The main core of the engine is accessed through this door. *(Ken Neubeck)*

This close-up view shows the components that surround the main core of the Lycoming engine. The diagonal strut that goes across the engine is the engine bearer strut. *(Ken Neubeck)*

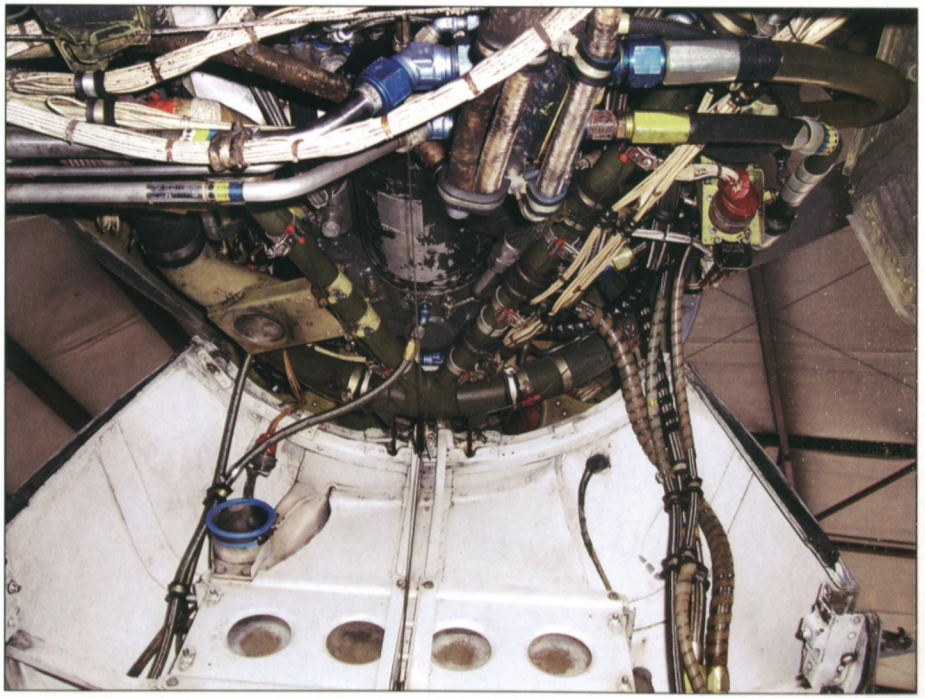


This is a view from the rear of the left engine with the quick-release lower access door open. The door is hinged on the front of the engine cowling, and it contains a number of hydraulic lines inside. The right engine has identical access doors. *(Ken Neubeck)*



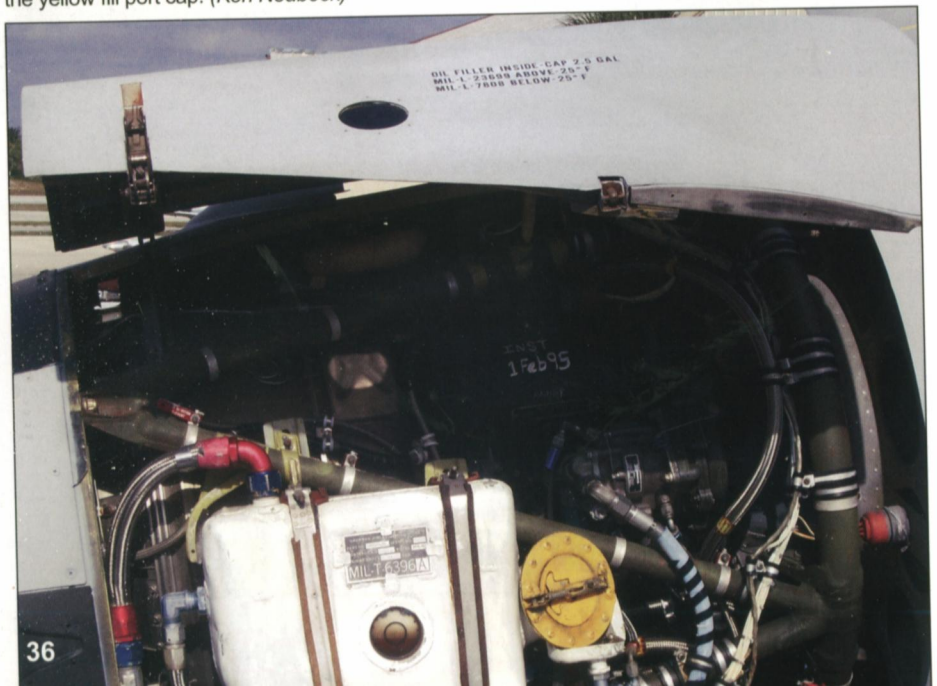
The lower part of the engine consists primarily of engine accessories such as the starter and generator assembly, which is the darker cylinder in the middle. *(Ken Neubeck)*

This view of the lower part of the engine shows some of the hydraulic lines that are attached by the blue fittings seen above. *(Ken Neubeck)*



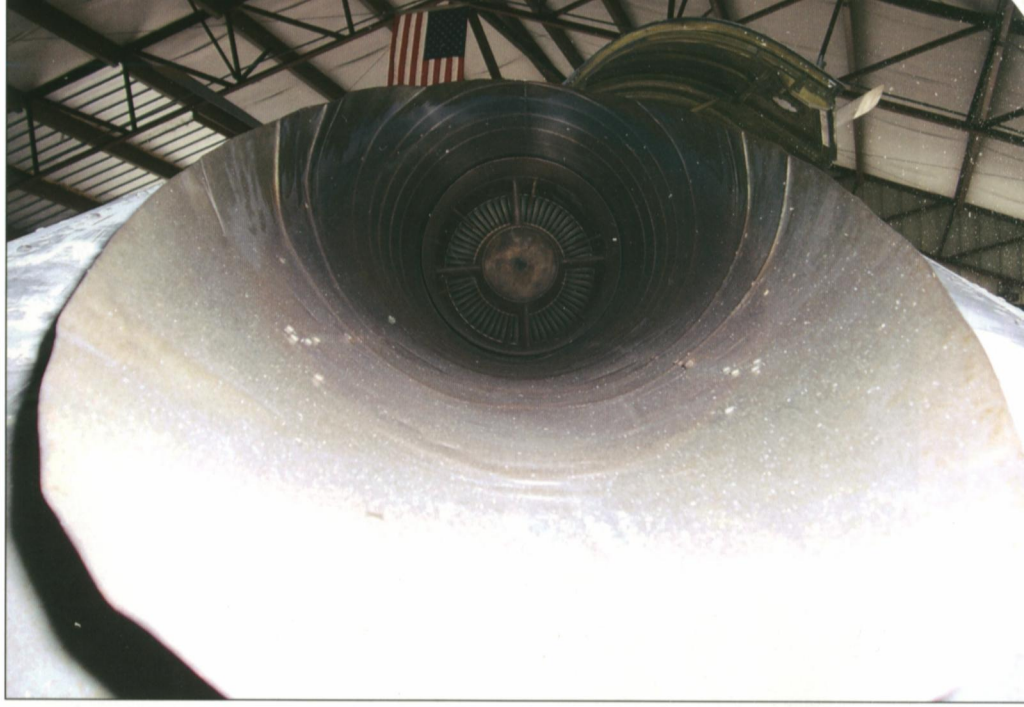
This view shows the outboard side of the right engine with the access door held open by a rod. The engine is mounted to a frame known as an engine basket. *(Ken Neubeck)*

This is a view of the left engine with the inboard access door opened. The white aluminum tank is a 10-quart capacity oil tank that is mounted to the frame of the engine basket. Oil is filled into the tank by the yellow fill port cap. *(Ken Neubeck)*



This view of the right engine shows the engine components with respect to the wing. Inside the white oil tank is a pendulum that helps feed the engine oil during extreme angles when the aircraft is performing certain maneuvers, such as a roll. By having the Mohawk designed such that the engine is mounted to a basket that is mounted to the airframe, quick engine changes are possible in the field. *(Ken Neubeck)*

This particular museum display aircraft has had the engine and all of the engine accessories removed. The support ring and the engine bear strut that make up the engine basket assembly can be seen lining the inside of the engine nacelle area as well as some of the latches on the inside of the access doors for the engine. Toward the rear of the inside nacelle area is the exhaust nozzle section. *(Ken Neubeck)*



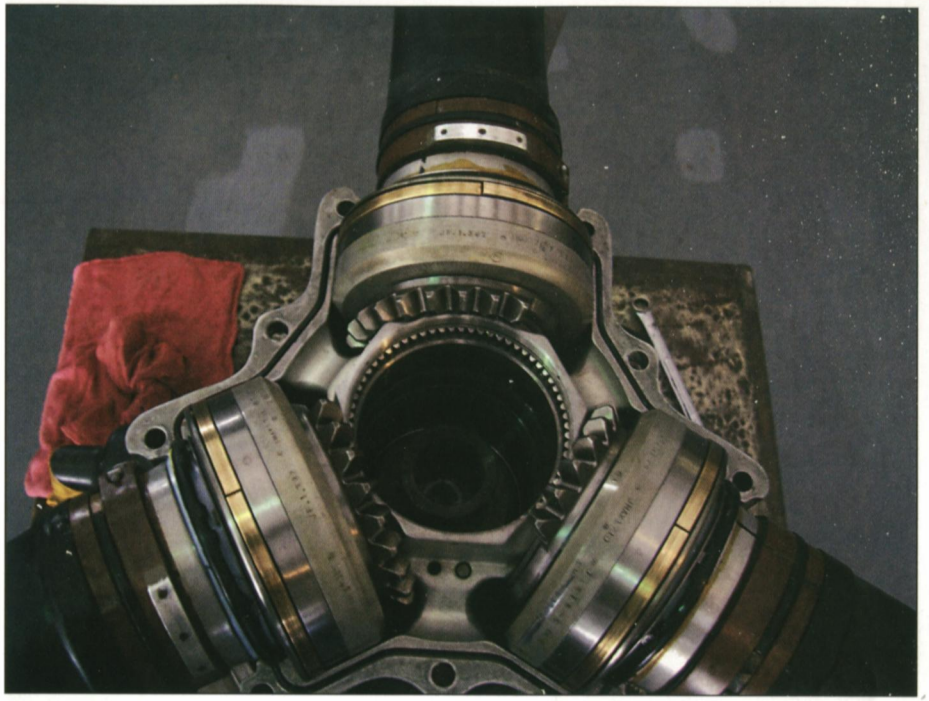
From the rear of the engine exhaust, the blades of the turbine exhaust section can be seen. *(Ken Neubeck)*

The rear of the right engine area that surrounds the exhaust nozzle section is shown; the engine has been removed. *(Ken Neubeck)*

This is a front view of the left engine nacelle area with the propeller assembly and rotor removed, showing only part of the shaft and the electrical wiring that goes to the rotor. The engine for the Mohawk was originally designed for a helicopter, and it is out of production. However, due to careful maintenance, the engines of several restored aircraft and other aircraft in Argentine service are kept operable. *(Ken Neubeck)*

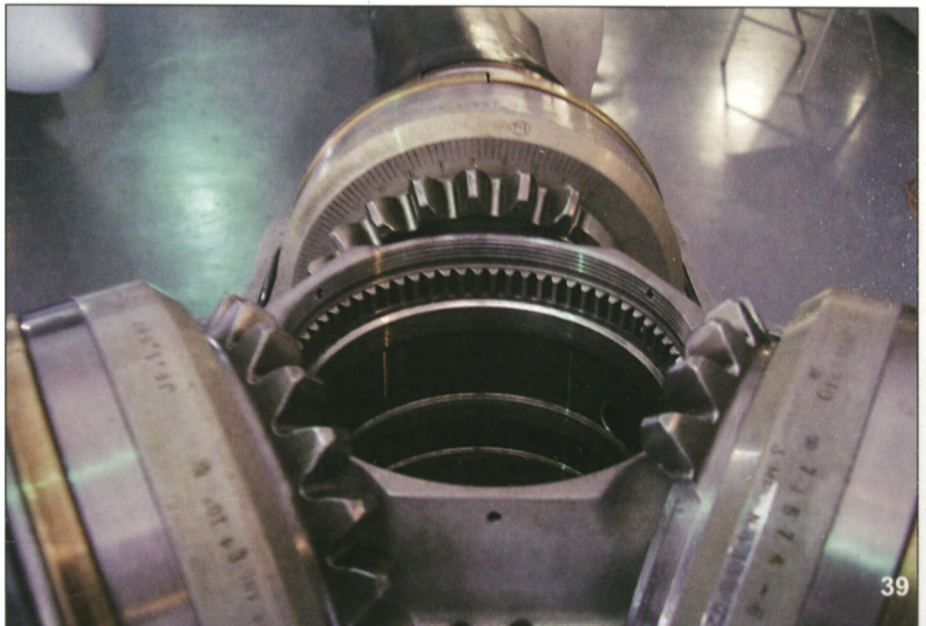
This is a side view of the propeller assembly installed on the Mohawk with the rotor cap removed. The assembly behind the dome portion of the hub is the propeller hub pitch change mechanism. Through this mechanism, the pitch of the blades can be adjusted to selected angles through the feathering controls located in the cockpit. Some of the electronics can be seen located behind the center of the propeller. *(Ken Neubeck)*

This is a close-up view of the side of a Mohawk propeller being serviced. The rotor cap has been removed, showing the arms of each of the three propeller blades linking in the center. Note the shaft portion of the propeller assembly below the rotor area. *(Ken Neubeck)*



This top view of the disassembled propeller shows the rotor cap removed and each arm of the propeller linking with the gear of the rotor. *(Ken Neubeck)*

This close-up shot of the rotor assembly in tear-down state shows that each propeller arm is calibrated as it links with the center portion of the rotor. *(Ken Neubeck)*

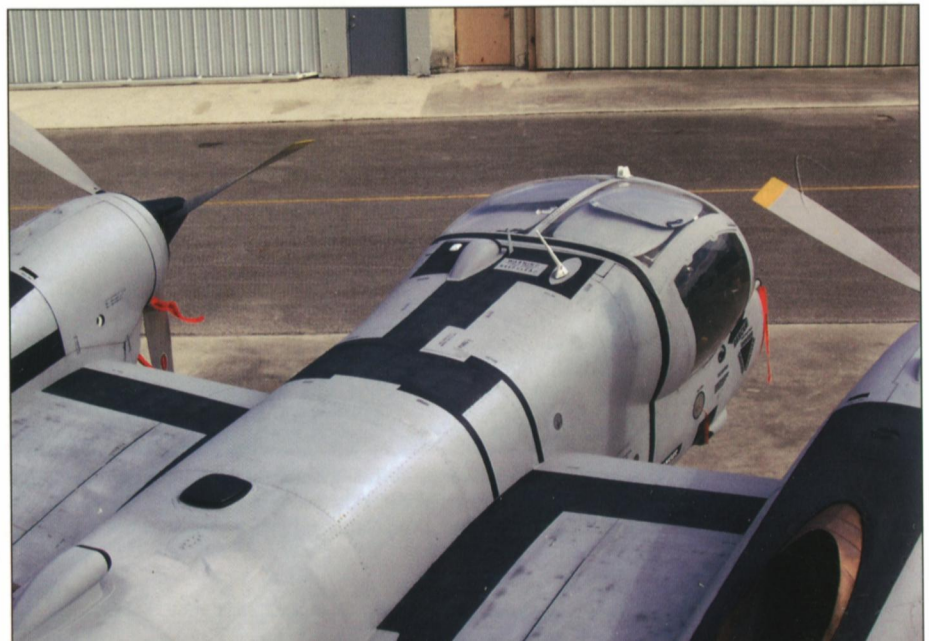


This view shows the entire left engine nacelle assembly. Note that the exhaust area of the nacelle has a metal structure that is the exhaust nozzle. *(Ken Neubeck)*

This topside view of this OV-1D Mohawk shows the basic paint scheme used for the D model aircraft: light gray as the primary color, black trim on selected surfaces, and red for the inside area of the aileron. *(Ken Neubeck)*

This topside view of the right side of the aircraft shows the right engine nacelle area and tail assembly. Note that both the single-slotted flap and the drooping aileron are in extended position; they are used during lower speeds. *(Ken Neubeck)*

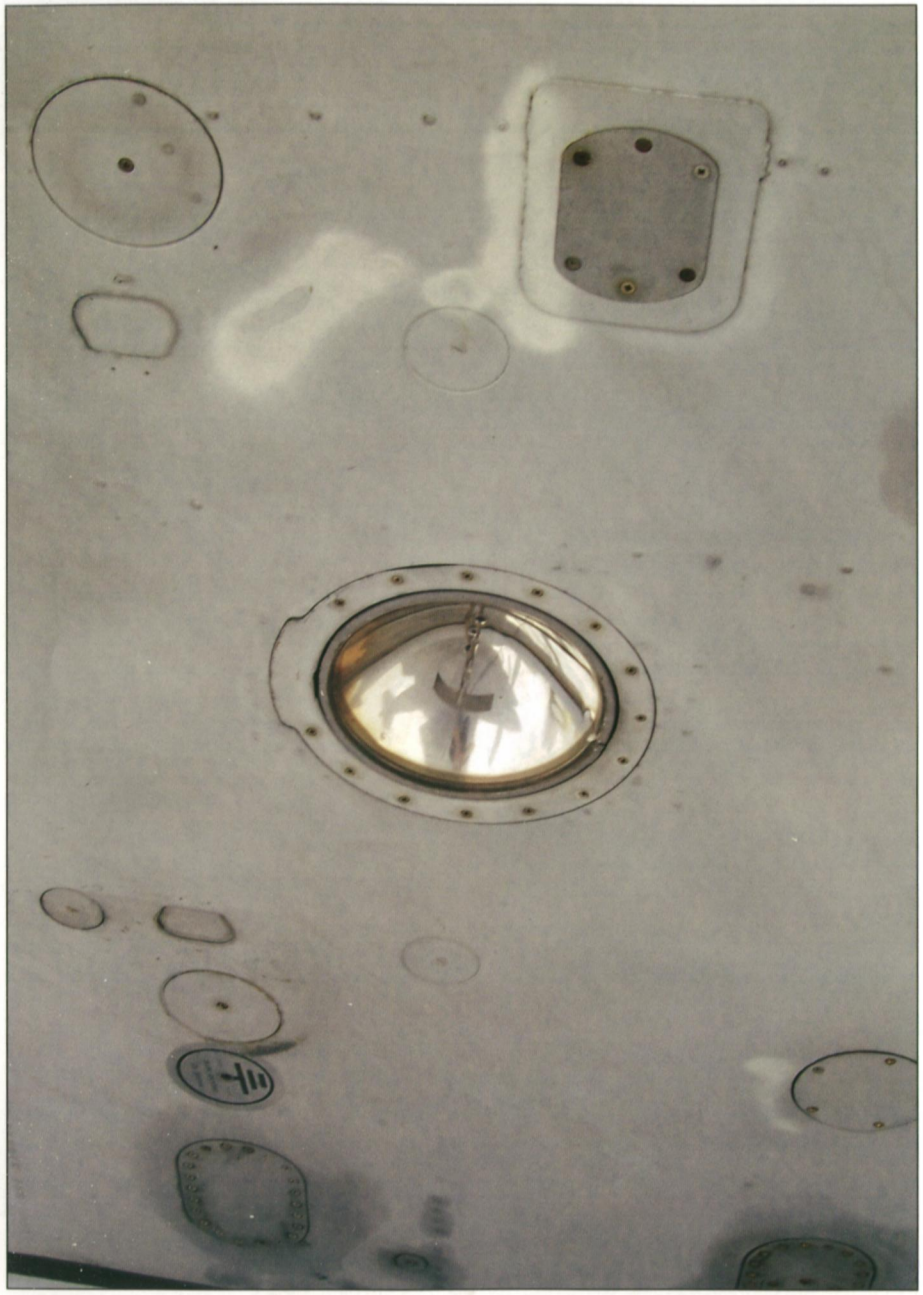
This close-up view of the top portion of the fuselage shows the areas that are painted black. The exhaust area of the right exhaust nozzle is discolored as a result of high temperatures. *(Ken Neubeck)*



This view shows the arrangement of the cockpit of the OV-1D Mohawk with respect to the two engines. *(Ken Neubeck)*

This view shows the right wing with respect to the right engine nacelle. At the end of the wing is the green starboard navigation light. Note the four static dischargers that protrude from the rear of the wing. *(Ken Neubeck)*

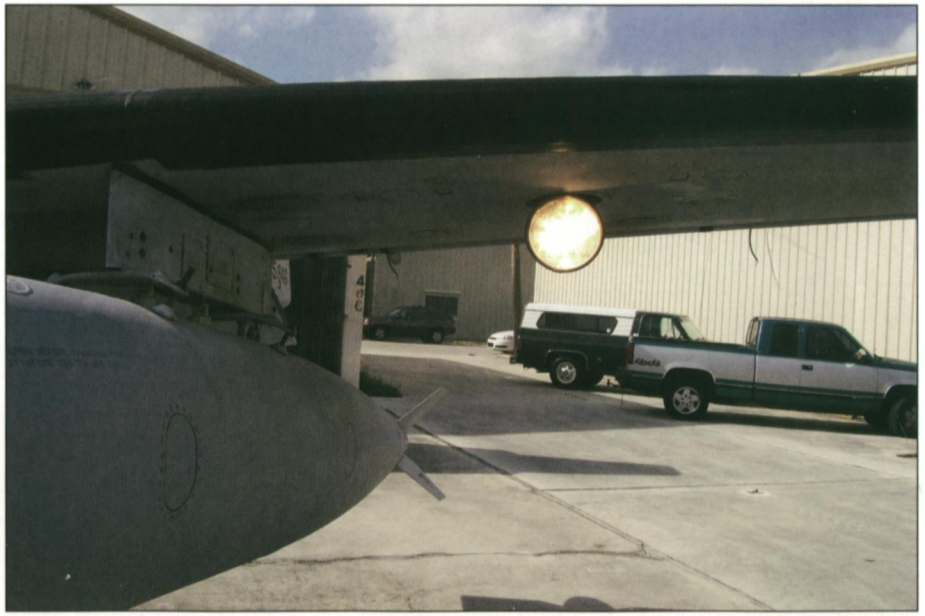
This topside view of the right wing of this OV-1D Mohawk shows a number of the major sections of the right wing section. Going from the outboard side of the engine is the inboard drooping aileron, followed by the trim tab surface, then the aileron trim tab surface, and finally the starboard aileron. From this view, it can be seen that each of the four aileron surfaces has a static discharger extending from the rear of the surface. There is a small flight control surface, the single-slotted flap that is located between the engine nacelle and the fuselage. *(Ken Neubeck)*



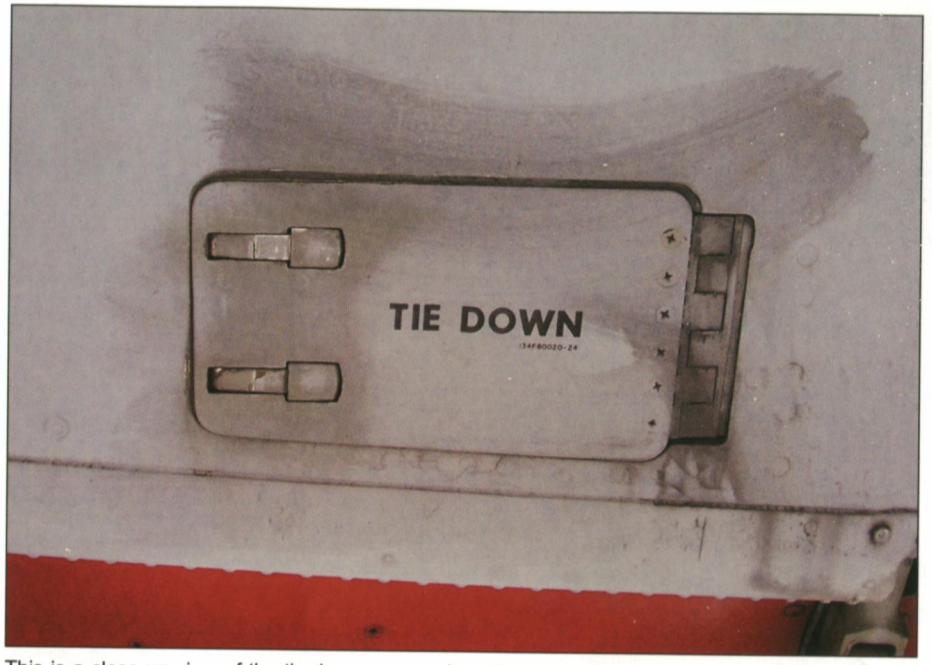
Located on the left wing just outboard of the first pylon is a high-intensity light, the left wing landing light. When the light is not in use, it remains flush with the surface of the lower wing. This light is only located on the left side of the Mohawk aircraft. *(Ken Neubeck)*

The wing taxi light moves out of its normal position through the use of hydraulics and is controlled from the cockpit during landing. *(Ken Neubeck)*

This is the left wing landing light powered on and in operational position. *(Ken Neubeck)*

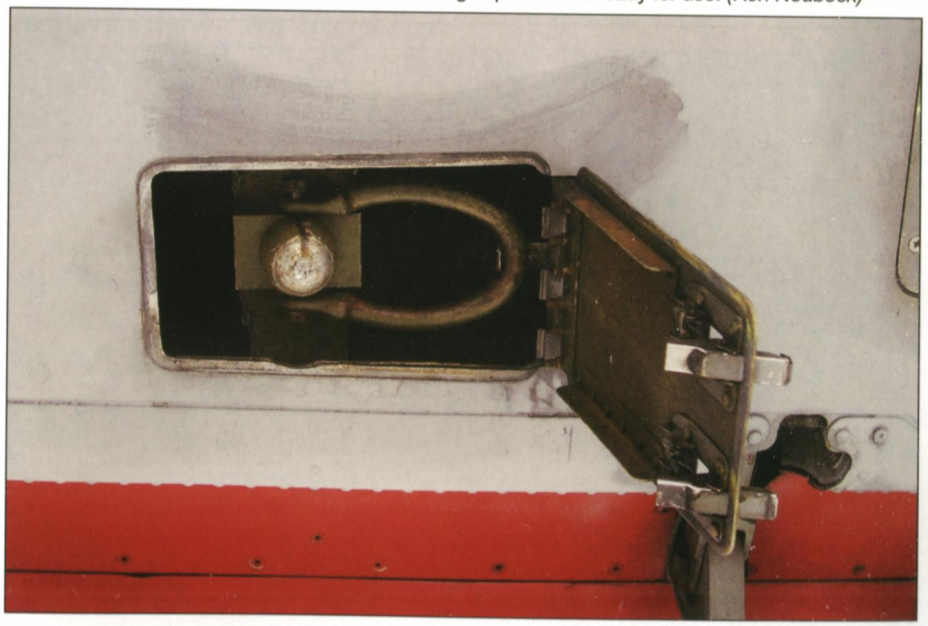


This view from underneath the left wing shows sections of the two inside aileron surfaces and how mechanical arm assemblies link them to the main wing. Note that on the main wing surface there is an access door for wing tie-down on the ground. An identical door is located on the right wing as well. *(Ken Neubeck)*



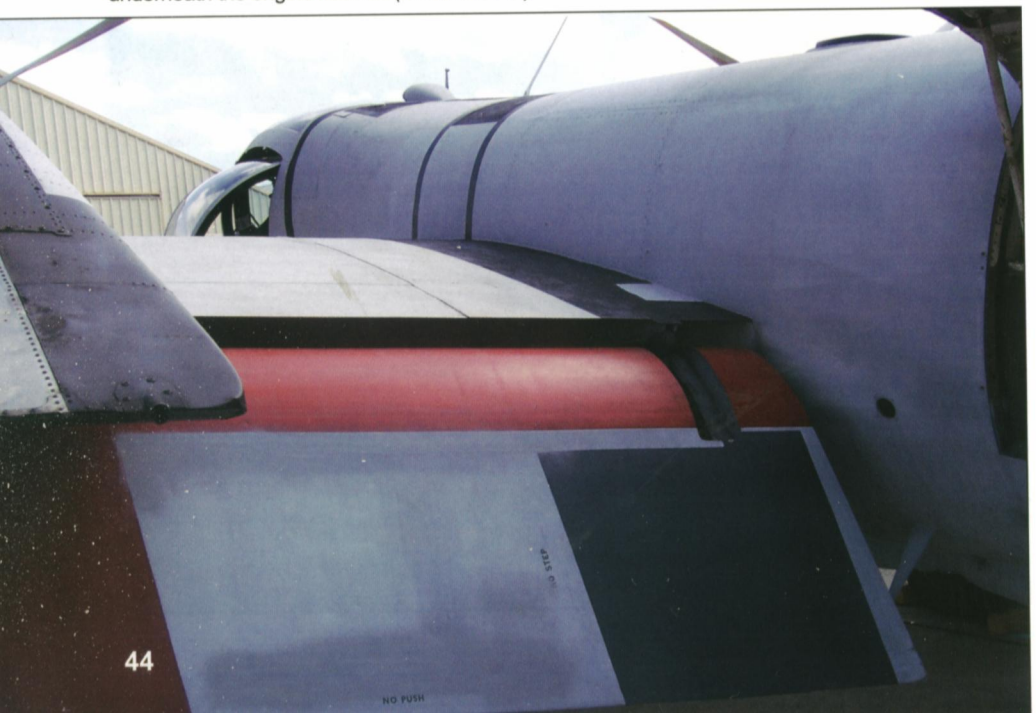

This is a close-up view of the tie-down access door that is opened by the use of two quick-release latches on one side. *(Ken Neubeck)*

The tie-down door is opened with the tie-down ring exposed and ready for use. *(Ken Neubeck)*



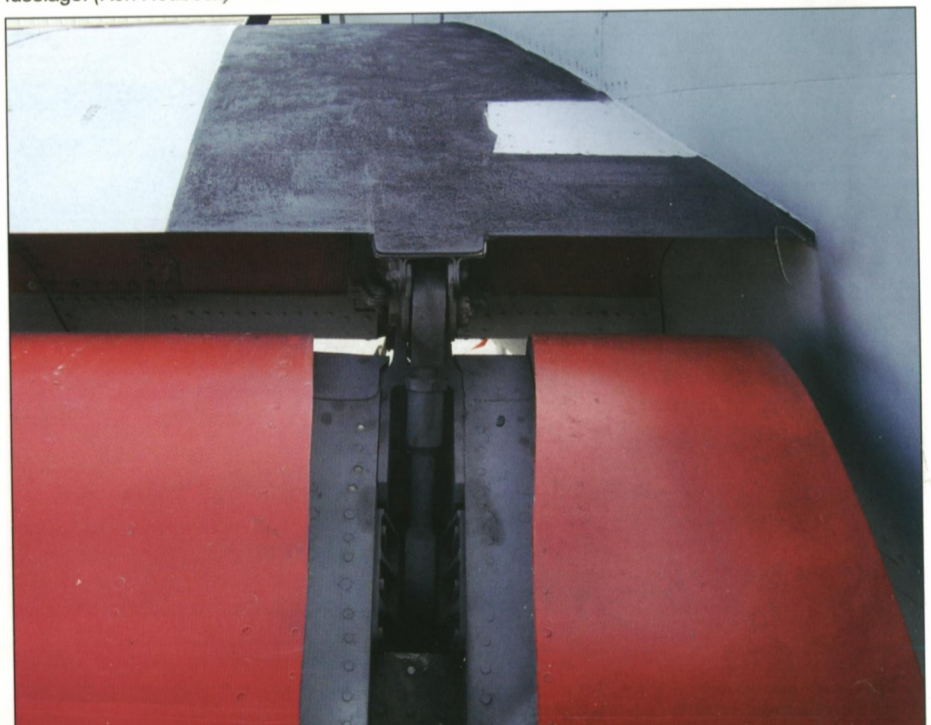
The three outboard starboard wing flight control sections are positioned upward in this shot: the aileron, the aileron trim tab, and the spring tab. *(Ken Neubeck)*

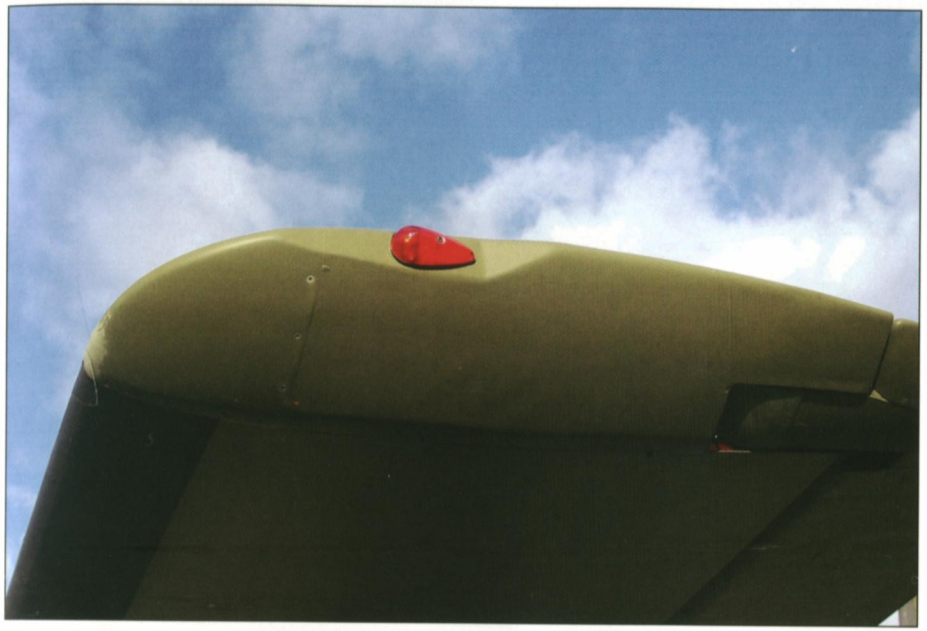
This is a view of the port inboard drooping aileron in extended position. Note that this surface goes underneath the engine nacelle. *(Ken Neubeck)*



This is a close-up view of the port spring tab of an OV-1D Mohawk aircraft in the extended position. *(Ken Neubeck)*

This is a close-up view of the pushrod linkage on the inboard drooping aileron that is closest to the fuselage. *(Ken Neubeck)*



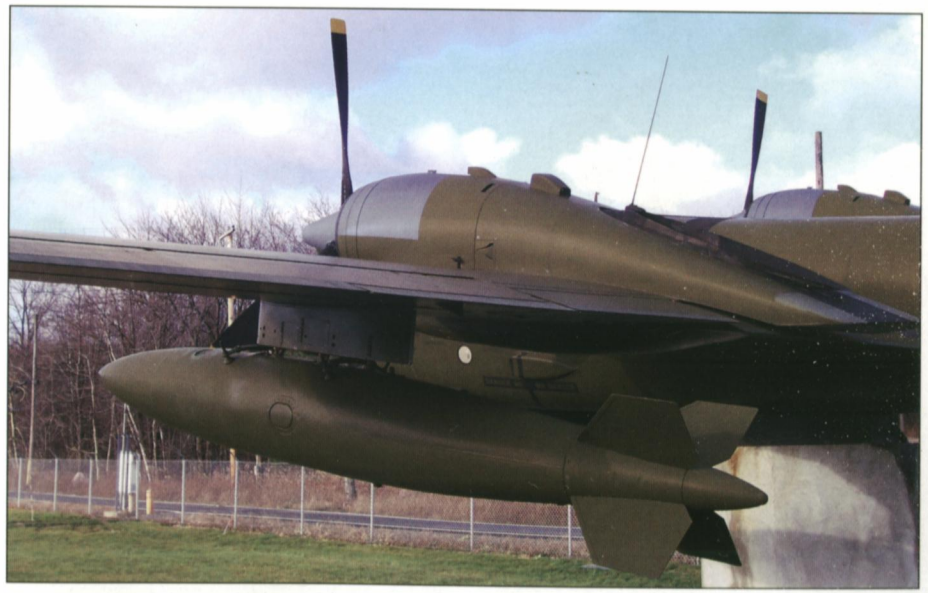


The red position light is located toward the front portion of the left (port) wing structure, just behind the leading edge. *(Ken Neubeck)*

The green position light is located on the right (starboard) wing, in a fashion similar to the red position light. *(Ken Neubeck)*

From the wingtip of this OV-1B Mohawk, the 150-gallon fuel tank that is hanging on the inboard aileron station can be seen. *(Ken Neubeck)*

As most Mohawks that were in operational service flew missions lasting more than two hours — more than the range of the internal fuel tanks — the use of external fuel tanks to extend the mission beyond two hours was standard. *(Ken Neubeck)*

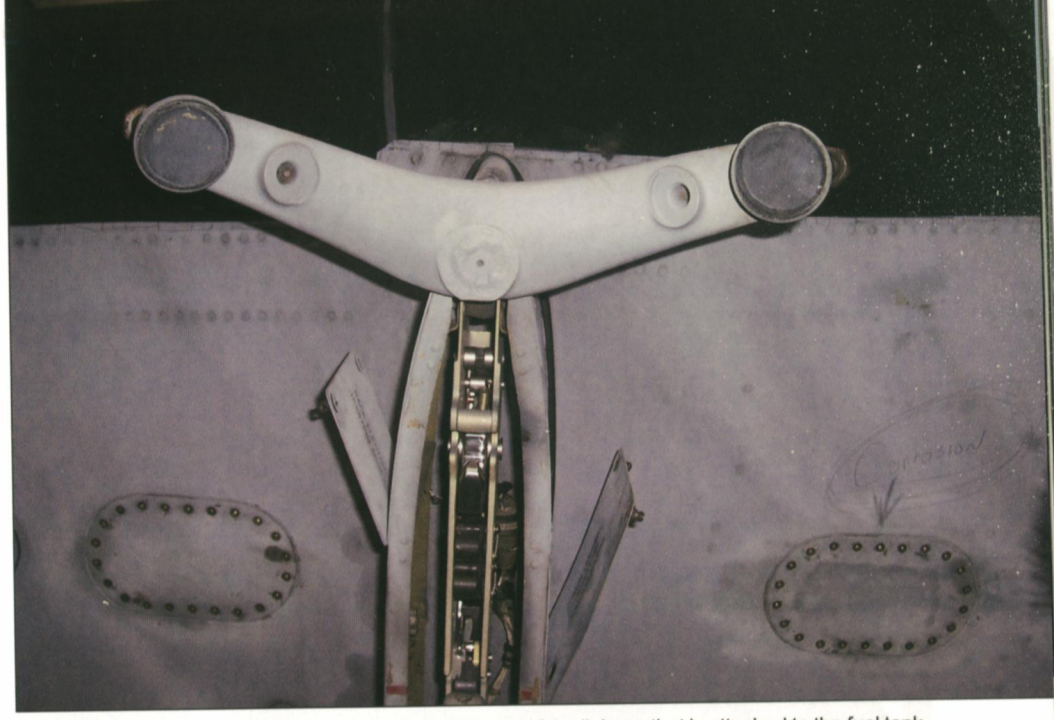


The 150-gallon external fuel tanks were standard for all Mohawk models, including the OV-1D model shown above. OV-1D Mohawks flew long missions over Kuwait and Iraq during Desert Storm in 1991, requiring the additional fuel. *(Ken Neubeck)*

A closer view shows the two sets of clamp assemblies on each of the three pylons, with the two outboard pylons used for stores and the inboard pylon used for the external fuel tank. *(Ken Neubeck)*

This is a rear view of the 150-gallon external fuel tank that was removed from the inboard pylon of a Mohawk aircraft. The attachment for the fuel line is on top of the tank, and toward the front is a fill cap for gravity refueling on the ground. For even longer missions or long ferry trips, a larger capacity 300-gallon external fuel tank would be used. *(Ken Neubeck)*

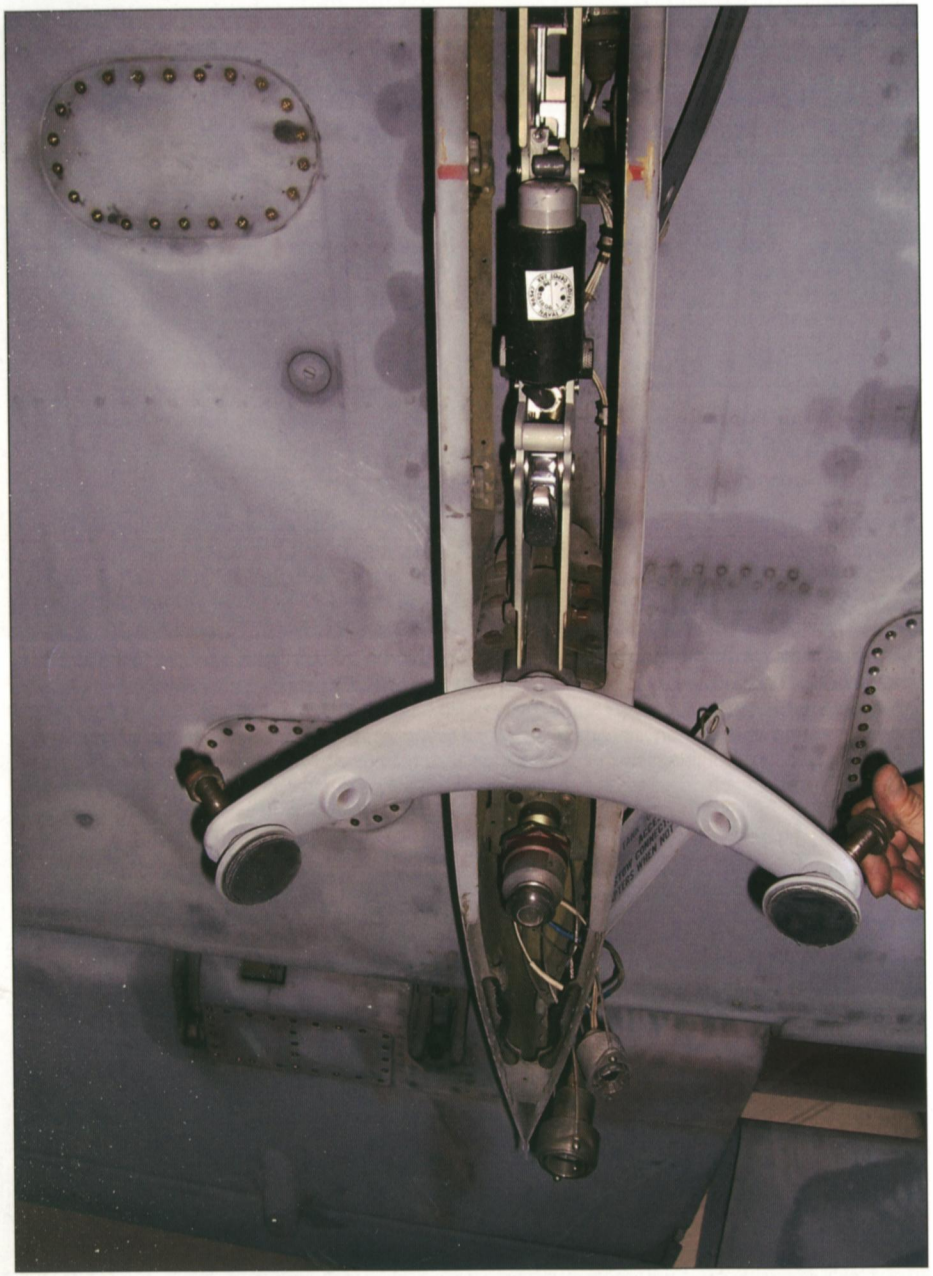
This is a side view of the right inboard pylon and the attachments to the 150-gallon external fuel tank. Note the three access doors on the pylon used for servicing. *(Ken Neubeck)*



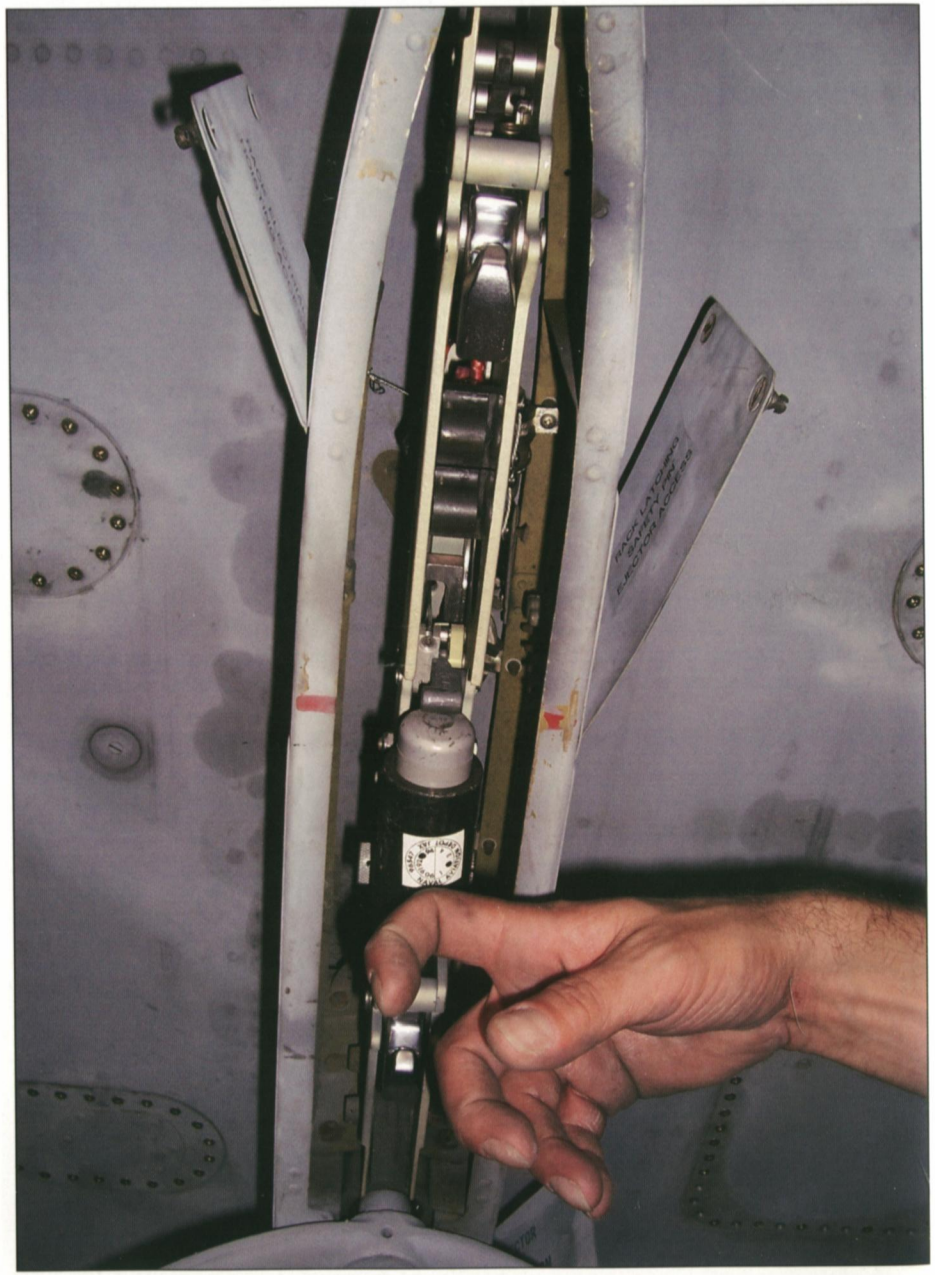
This is one of the two clamp mechanisms along with part of the linkage that is attached to the fuel tank. *(Ken Neubeck)*

This view shows one of the outboard pylons with no store or clamps attached. The Mohawk had hard points to accommodate three pylons on each wing. *(Ken Neubeck)*

The access panel on this pylon attachment is opened to show the linking mechanism that is connected to controls in the cockpit for releasing stores or the fuel tank during an in-flight emergency. *(Ken Neubeck)*



Maintenance personnel would typically tighten the inside attachment of the inboard pylon, so that during an in-flight emergency in which the tanks are jettisoned the tanks would pull away from the aircraft and not hit the propeller. This view shows the entire linkage mechanism inside the pylon that controls release of the fuel tank. *(Ken Neubeck)*



A maintenance person's hand shows where the emergency release point is for the mechanism inside the pylon that connects to the store or fuel tank, attached on the bottom portion of the pylon. The pilot from the cockpit controls the release mechanism during an in-flight emergency. *(Ken Neubeck)*

In Vietnam, JOV-1A Mohawks were armed. This one has a .50-caliber machine gun pod on the outboard pylon, along with a rocket launcher on the inside pylon. *(Douglas V Guentz)*

This JOV-1A Mohawk in Vietnam in 1963 has a .50-caliber machine gun pod on the outboard pylon, along with an XM-157 seven-shot rocket pod on the middle pylon. *(Douglas V Guentz)*

This JOV-1D Mohawk has an LS-59 flasher pod that is attached to the outside pylon of its right wing. The pod was used for providing flash during nighttime photo missions. *(John A. Gourley III)*

This RV-1D Mohawk has an ELINT pod attached to the outside pylon of the right wing. This system used on the RV-1D Mohawk allowed for real-time readout of intercepted signals. *(John A. Gourley III)*

The tail design for the Mohawk was originally a single T-style tail; however, wind tunnel tests found issues with trim control, and thus the unique triple stabilizer design evolved. *(Ken Neubeck)*

Each side of the tail section of the Mohawk has an elevator tab. The left elevator tab is extended downward in the shot above. *(Ken Neubeck)*

Tail markings show the last five serial numbers on the bottom portion of the tail assembly. The complete serial number for this OV-1D is 68-15946. *(Ken Neubeck)*

The HF antenna for the Mohawk (shown is D model 67-18924) comes out of the rear fuselage and is routed to the middle stabilizer, and from there the antenna is routed toward the top of the cockpit. *(Ken Neubeck)*

This OV-1D aircraft (69-16998) was assigned to the Army National Guard prior to retirement to the Valiant Air Command Warbird Museum. *(Ken Neubeck)*

Each of the leading edges of the three vertical stabilizers and the two elevator sections has black deicer boots. The ring structure on the center stabilizer is the VHF omnidirectional range (VOR) aerial, used for navigation. The red anti-collision light is also located on the top of the center stabilizer. *(Ken Neubeck)*

The three trailing edge stabilizers of the tail are all linked together and turn together as a single unit. *(Ken Neubeck)*

This close-up view of the rear portion of the tail assembly shows the white tail navigation light and two round flat sections that are located on either side of the light. These round sections are the antennas for the APR-39 radar warning receiver (RWR) that allows any ground-based radar signals to be detected by the aircraft. *(Ken Neubeck)*

The complete serial number for this aircraft is 69-17004. The special wrecking truck symbol near the top of the tail section signifies that this was the crew chief's aircraft during the trip to Saudi Arabia in Operation Desert Storm. The aircraft carried a number of the tools and equipment used to service the OV-1D aircraft during the ferrying of several OV-1D aircraft from the 15th MI. Another Mohawk squadron, the 224th MI from Savannah, Georgia, joined this squadron in Saudi Arabia during the war. *(John A. Gourley III)*

This rear-view shot of the tail section from this restored OV-1B aircraft (59-2631) shows a color scheme of olive-drab for the fuselage and yellow-orange for the lettering. This aircraft has the tricolor insignia of the 3rd Armored Division (nicknamed the Spearhead Division). The olive-drab color for the fuselage was used for the OV-1C model as well until a change in scheme was made to go to ghost gray for the OV-1D Mohawks. *(John A. Gourley III)*

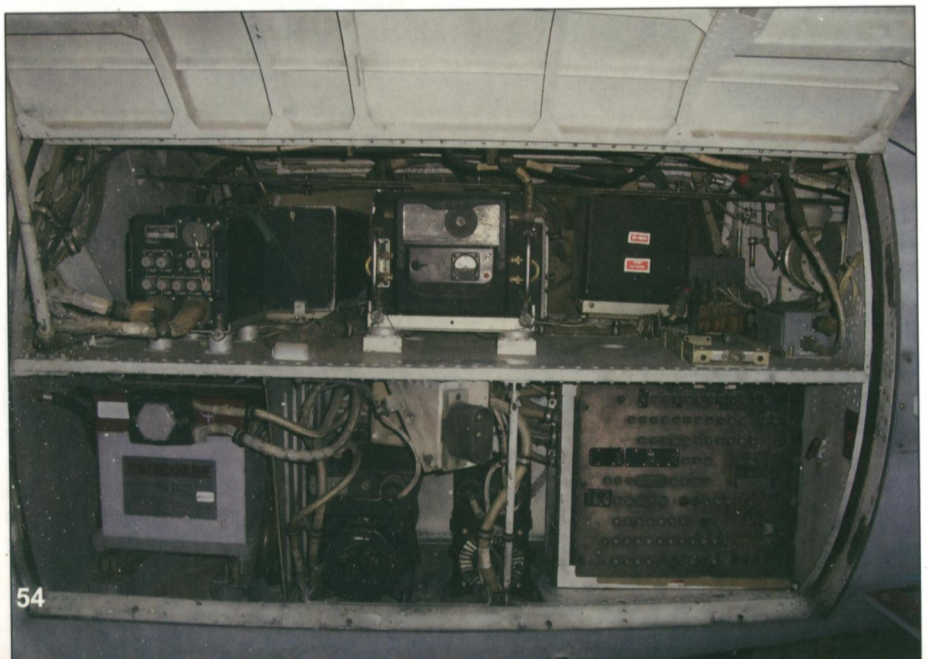
This OV-1D aircraft has been restored by Mohawk Technologies with the paint scheme of light gray and bright orange to reflect the test school configuration of the U.S. Navy Test Pilot School (USNTPS). The orange paint is used on parts of the tail section and on parts of the forward fuselage. The USNTPS insignia is located on the middle of the tail. Note that the tailskid assembly that is located on the bottom of the rear fuselage is being used as a tie-down for this aircraft. It was designed to prevent damage to the rear fuselage in the event of overrotation. *(Ken Neubeck)*

This tail section is from an OV-1B Mohawk (64-14247) on display inside the Tobyhanna Army Depot. The color scheme for the aircraft is olive for the fuselage, black used for all of the lettering, and no other insignia on the tail. The leading edge of the vertical stabilizers and the elevator sections have black deicer boots. *(Ken Neubeck)*

The left access door to the avionics equipment rack on the Mohawk is located directly in front of the left air brake and opened by six quick-release latches. *(Ken Neubeck)*

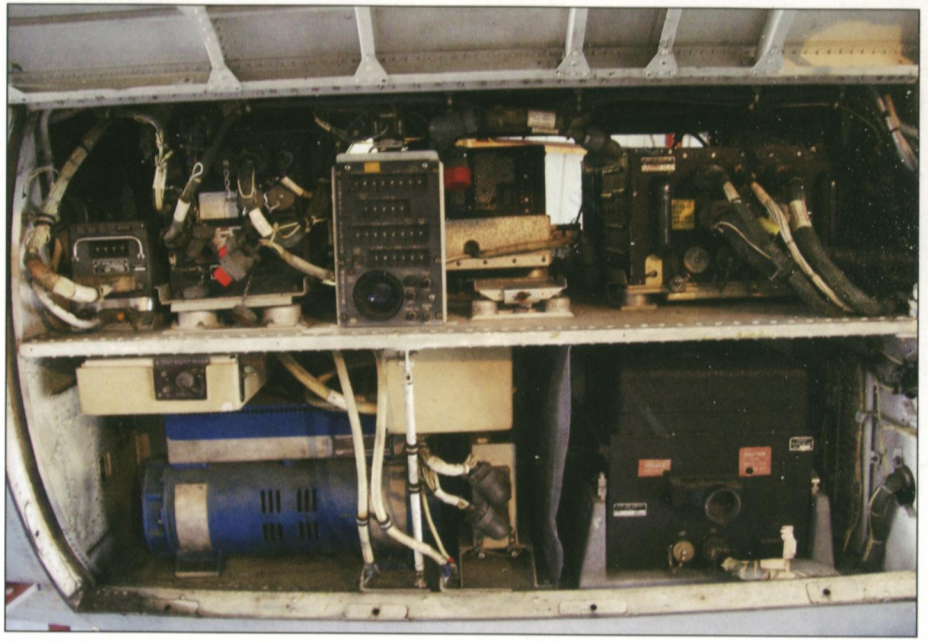
The left access door is hinged on the upper part of the door and is held up by a rod, allowing unobstructed access to the avionics equipment. *(Ken Neubeck)*

This view shows some of the avionics that can be accessed from the left side of the aircraft. On the top shelf are the power supply and other modules for camera controls. On the bottom shelf are the battery, electrical generators, ground power socket, and circuit breaker panel. *(Ken Neubeck)*



The power supply unit for the camera controls is located directly above the battery next to the rod on the far left. *(Ken Neubeck)*

The right side equipment access door is located in front of the right air brake and is also opened by six quick-release latches. *(Ken Neubeck)*



As with the left side access, the right side access allows personnel to get to avionics equipment. The blue unit on the bottom left is the motor generator. *(Ken Neubeck)*

This view shows that if all of the equipment is removed from the top shelf, one can see through the other access door on the left side. *(Ken Neubeck)*

This is a close-up view of the RT-859A/APX-72 identification, friend or foe (IFF) unit that is located on the far left side of the right side access door area. *(Ken Neubeck)*

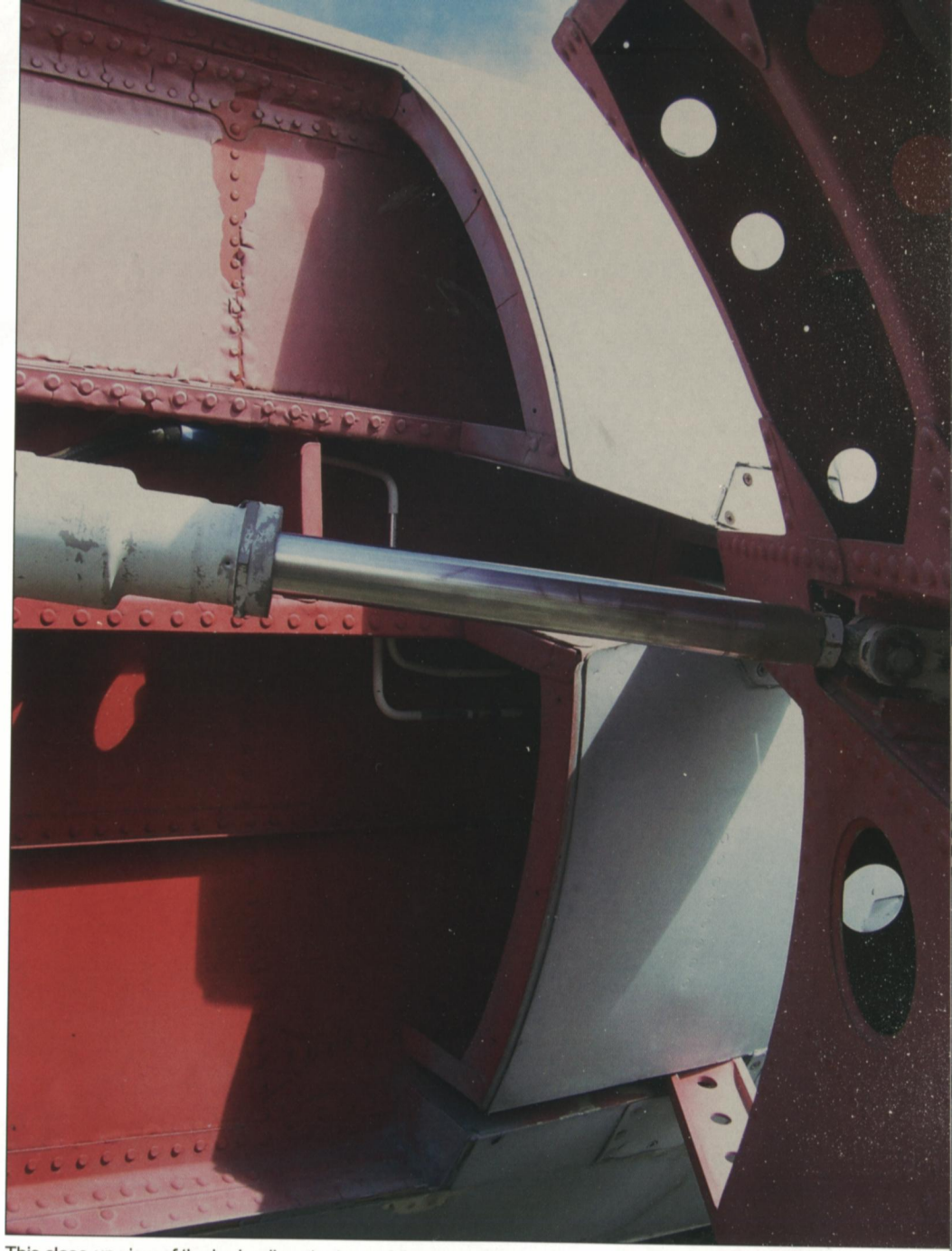
The original OV-1A had the air brake panels on both sides of the fuselage, but it was deleted for the OV-1B because of weight concerns. As seen in OV-1B model shown above, there is no speed brake panel behind the main access door. *(Ken Neubeck)*

The air brake system was brought back during the OV-1C production and later for the OV-1D. The speed brake is shown in the open state for the OV-1D model aircraft above. *(Ken Neubeck)*

The air brake design is symmetrical on both sides of the aircraft, behind the main access door. Below is the right side speed brake of an OV-1D aircraft. *(Ken Neubeck)*

In this view, the air brake is shown fully open with the hydraulic actuator and arm assembly fully extended. The inside surfaces are painted bright red. *(Ken Neubeck)*

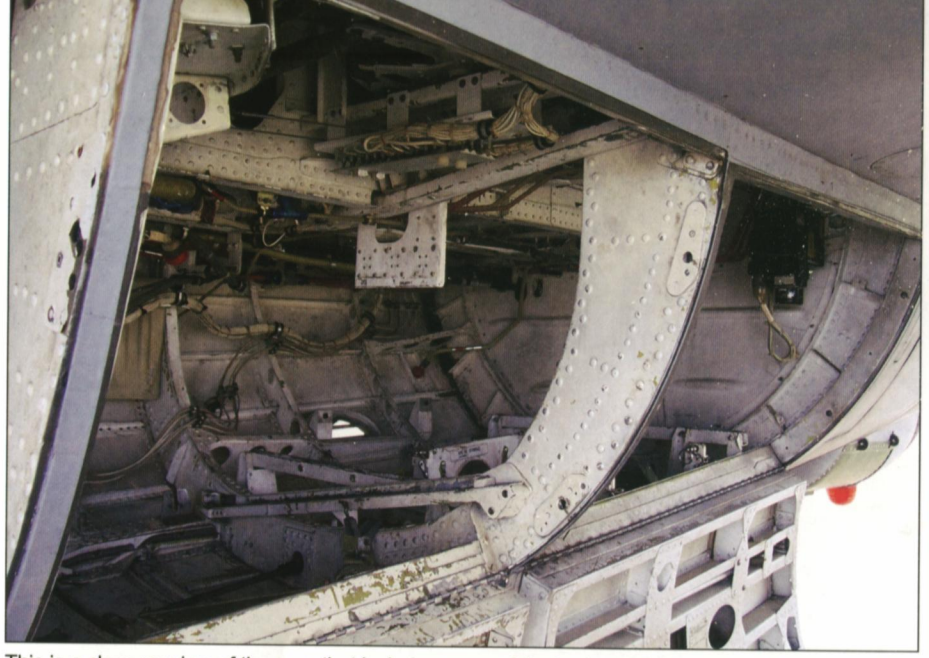
In this view of the left air brake assembly, the hydraulic lines can be seen as well as the various structural components that comprise the system. The air brakes were typically deployed during flight to slow the aircraft when doing surveillance missions and sometimes during short-runway landings. *(Ken Neubeck)*



This close-up view of the hydraulic actuator and the arm assembly shows the connecting points to the air brake. Note the hinge point at the bottom that rides along the slotted area of the fuselage when the speed brake opens. *(Ken Neubeck)*

This is the first production OV-1B (59-2691) during flight testing over Long Island in the early 1960s. This particular OV-1B aircraft did have the air brakes installed at midfuselage; however, the air brakes were deleted for later production OV-1Bs. *(Grumman archives via Dave Conroe)*

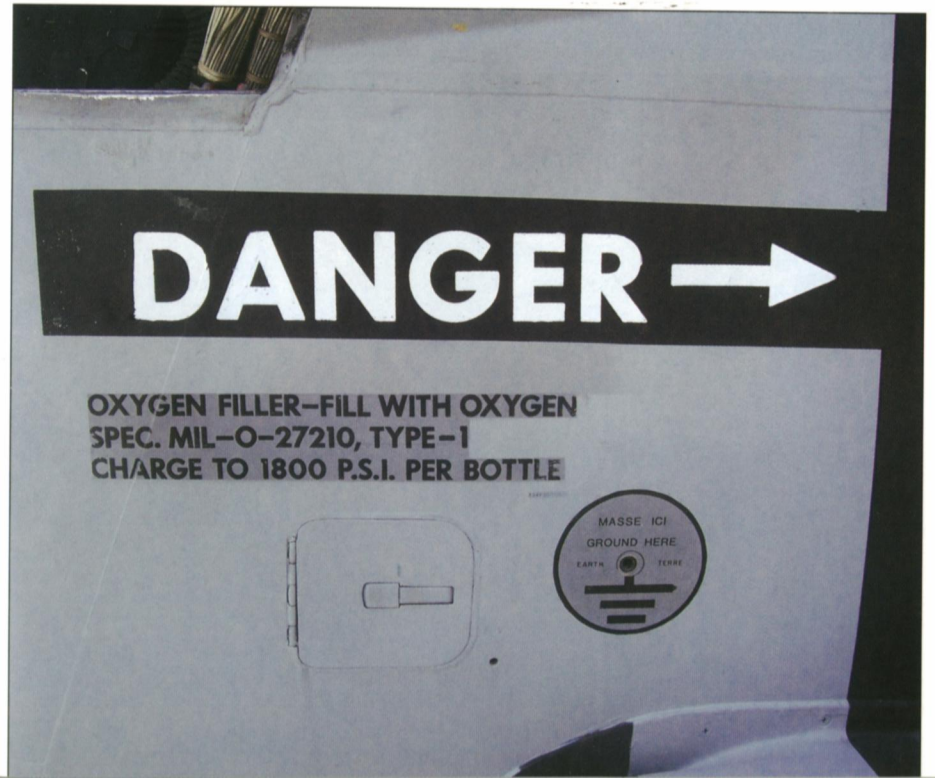
This unique view of an OV-1D shows many of its quick-release access doors opened. Note the three access doors behind the air scoop on the lower fuselage. *(Ken Neubeck)*

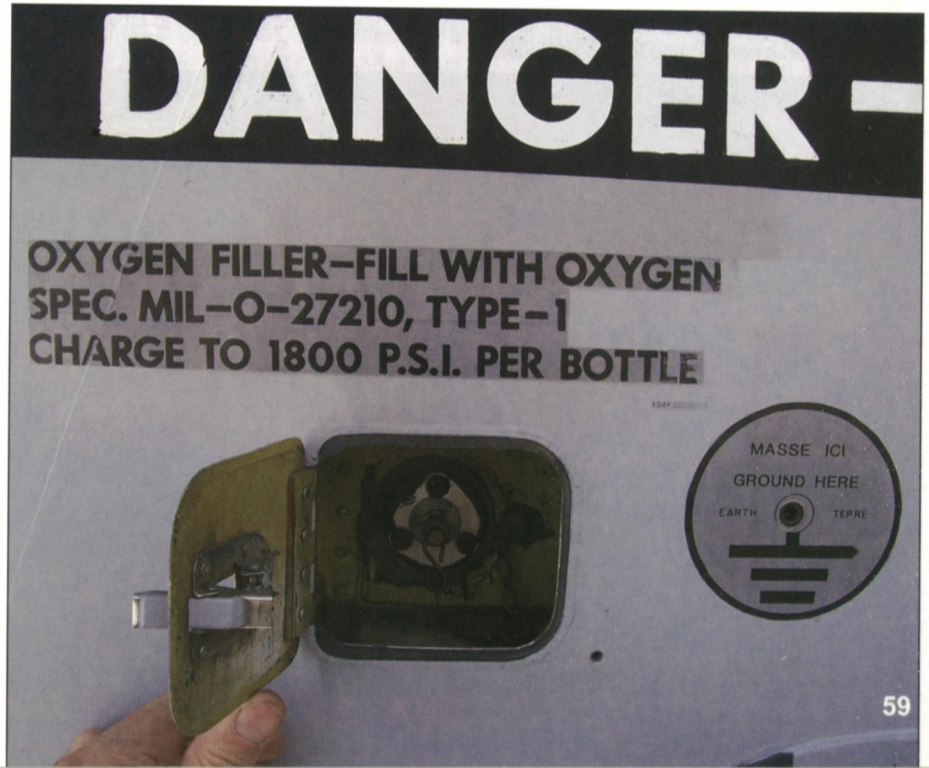


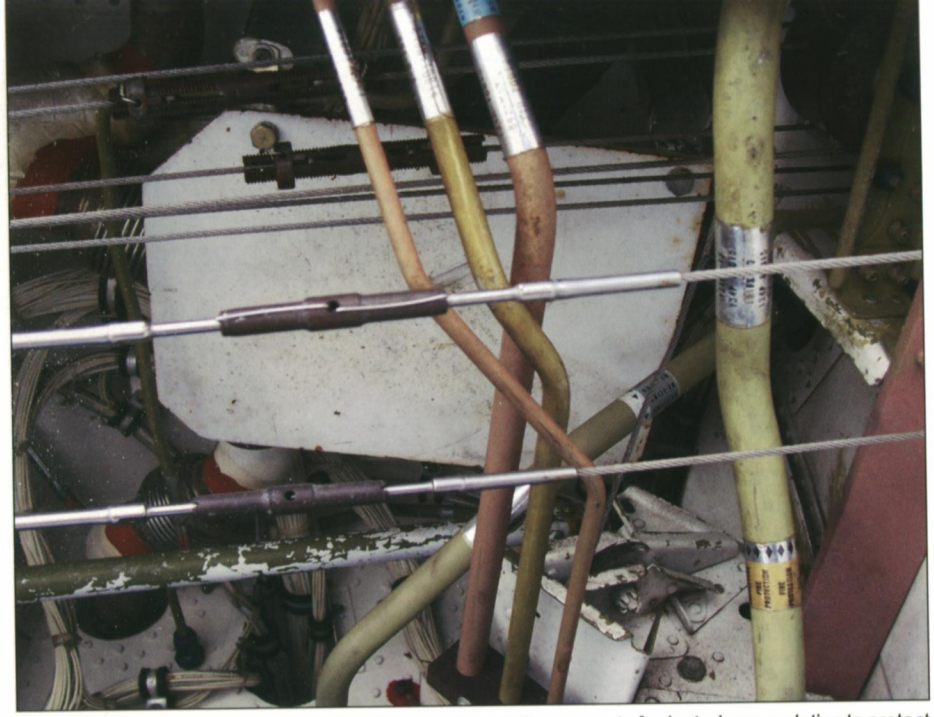
This is a close-up view of the area that includes some of the hydraulic lines and electrical wiring. The area is accessed by three doors. *(Ken Neubeck)*

Located on the left side of the aircraft, in front of the propeller warning line, is an access door for refilling the emergency oxygen to the cockpit. *(Ken Neubeck)*

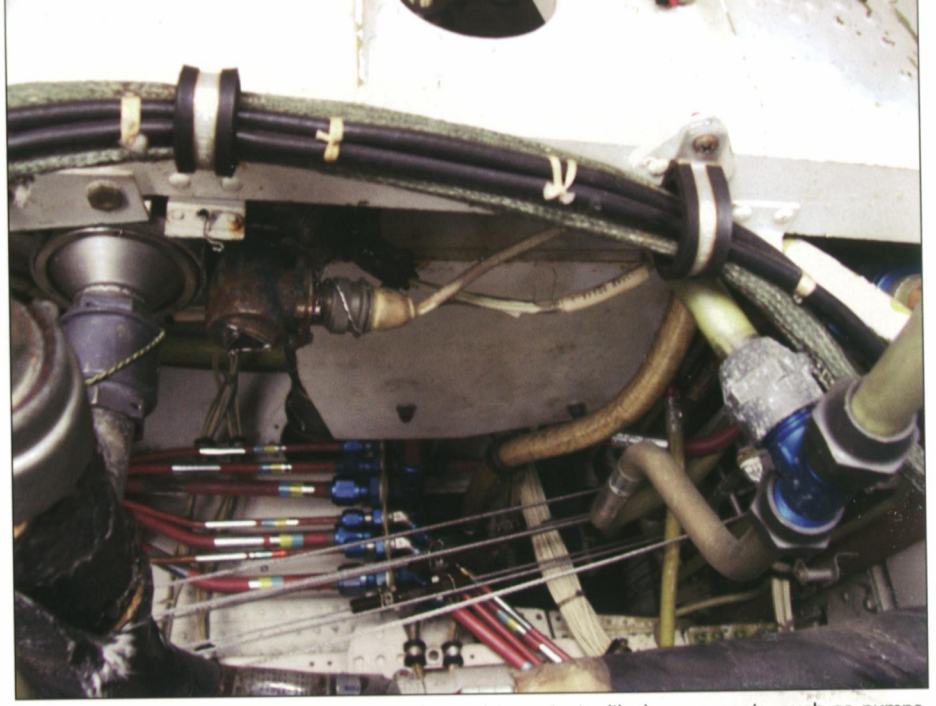
The door for refilling the emergency oxygen is a quick-release door, and a port for refilling the oxygen is behind the door. *(Ken Neubeck)*



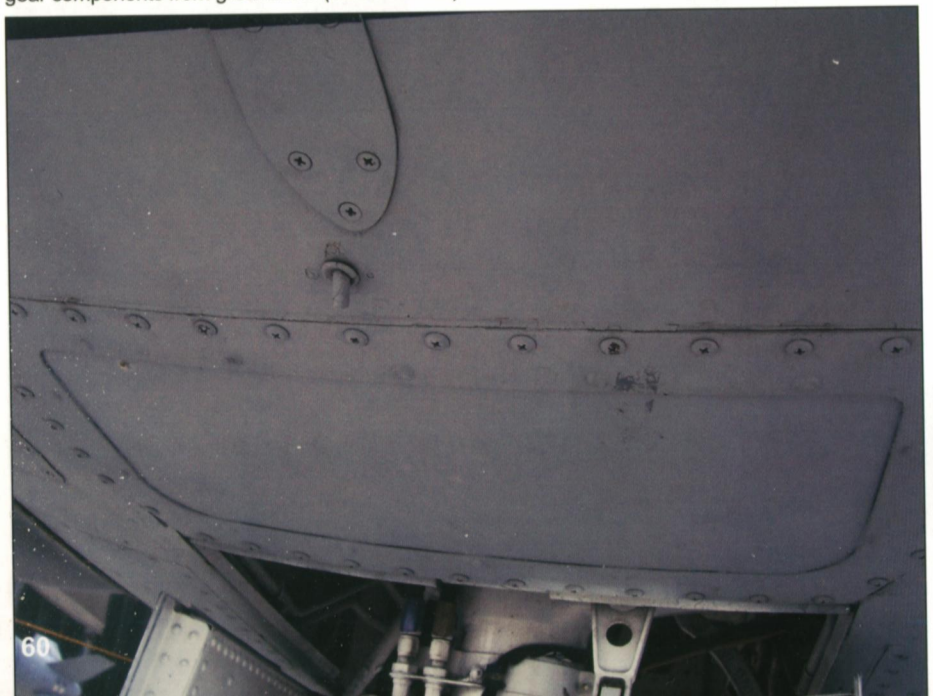


As the light-colored metal plate shows, the Mohawk uses the concept of selected armor plating to protect critical components in the fuel line, such as valves and pumps, from ground fire. *(Ken Neubeck)*



In the hydraulic system area, armor plating is used to protect critical components, such as pumps. *(Ken Neubeck)*

In addition to the use of internal armor plating, armor plates are used on the exterior of the Mohawk, such as the rectangular plate located in front of the nose landing gear that is used to protect landing gear components from ground fire. *(Ken Neubeck)*



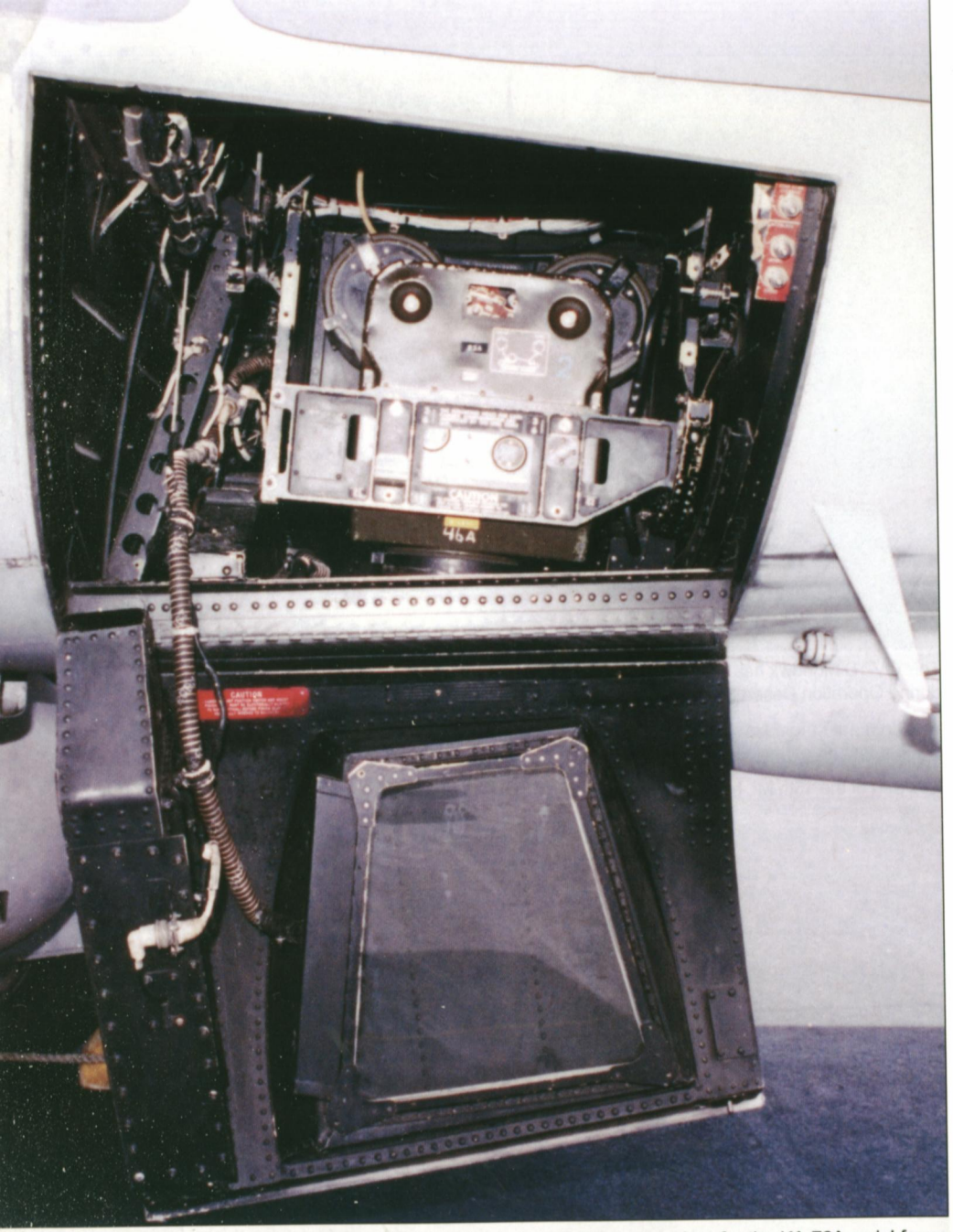
The floor that is underneath both the pilot and observer is a thick aluminum plate that provides armor plate-type protection for the crew from ground fire. *(Ken Neubeck)*

Mohawk aircraft feature some amount of nose art in addition to warning markings. This OV-1B has a round Mohawk emblem on the nose. *(John A. Gourley III)*

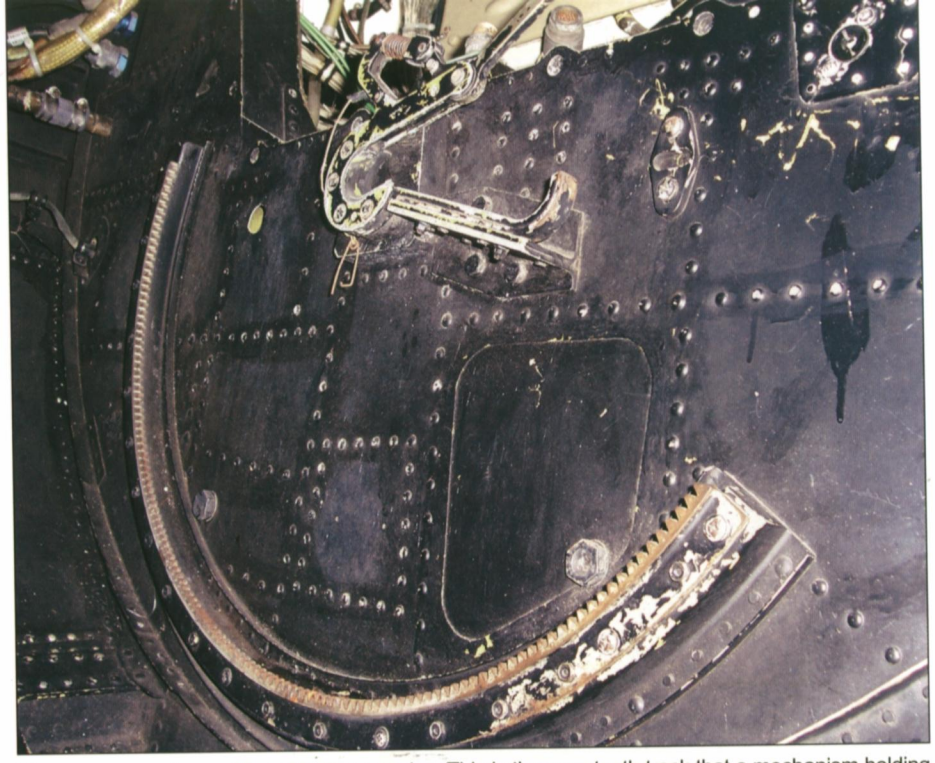
This OV-1D Mohawk has Bill the Cat painted on the nose, signifying that it was the crew chief's aircraft during Operation Desert Storm. *(Max Gauthier)*

This OV-1D Mohawk has been decorated in Desert Storm motif on the nose and elsewhere. Note the three camels painted on the nose landing gear door, signifying a mission milestone where the aircraft flew a 100 percent failure-free mission. *(Ken Neubeck)*

This is a close-up view of the Desert Storm motif that was painted on the nose of an OV-1D aircraft that was part of the 15th MI, based in Saudi Arabia, in 1991. *(Ken Neubeck)*

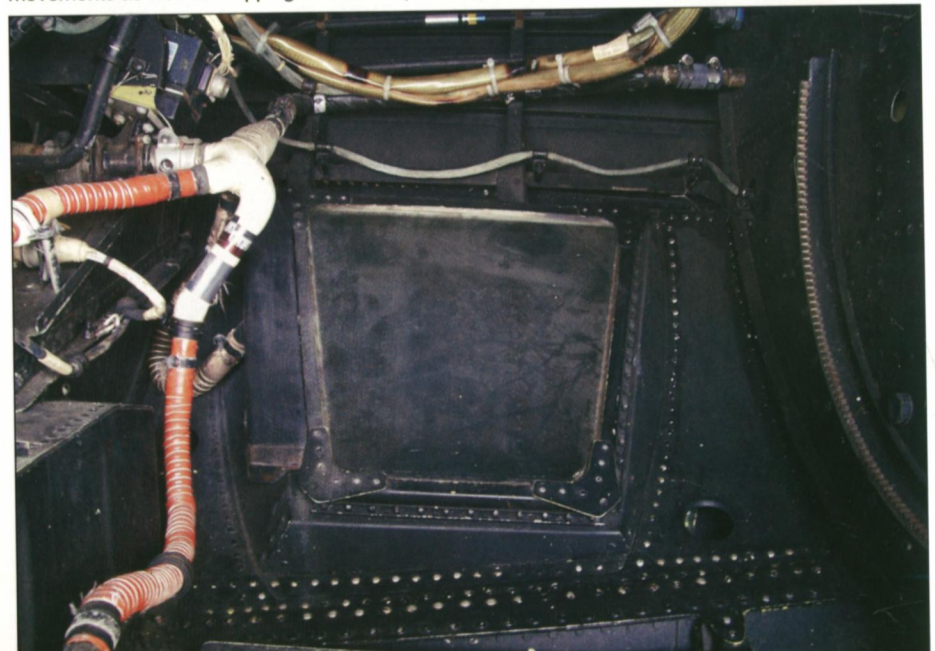


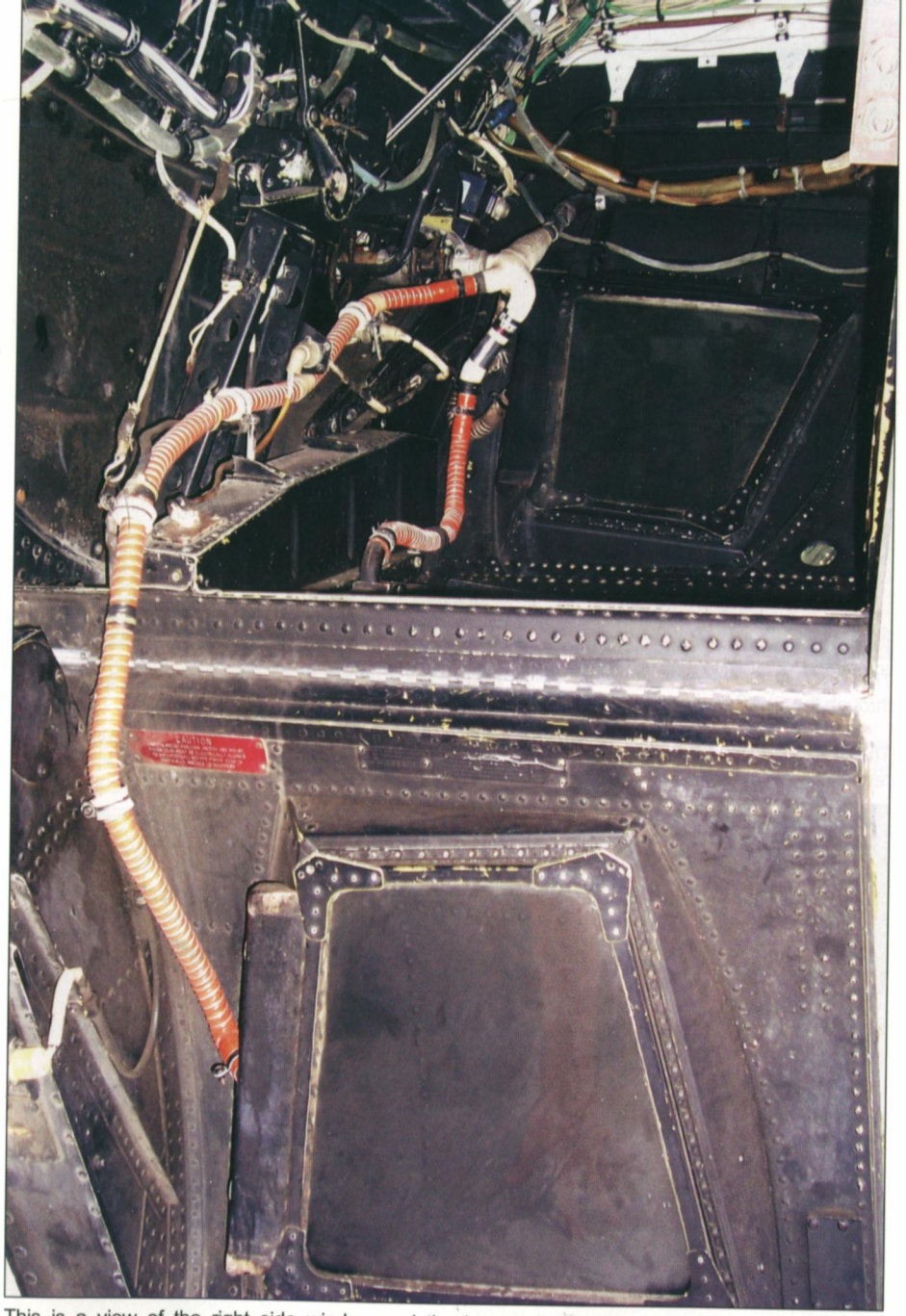
Located on the left side of the aircraft at midfuselage is the access door for the KA-76A serial frame camera. In this shot, the door is opened, revealing the camera pointed through the lower window. Note that there is also a window on the door itself, and it is covered by a metal skin for when the camera is not in use. The camera rides on a gear and can photograph through any one of three windows (left, bottom, and right) at this station. *(John A. Gourley III)*



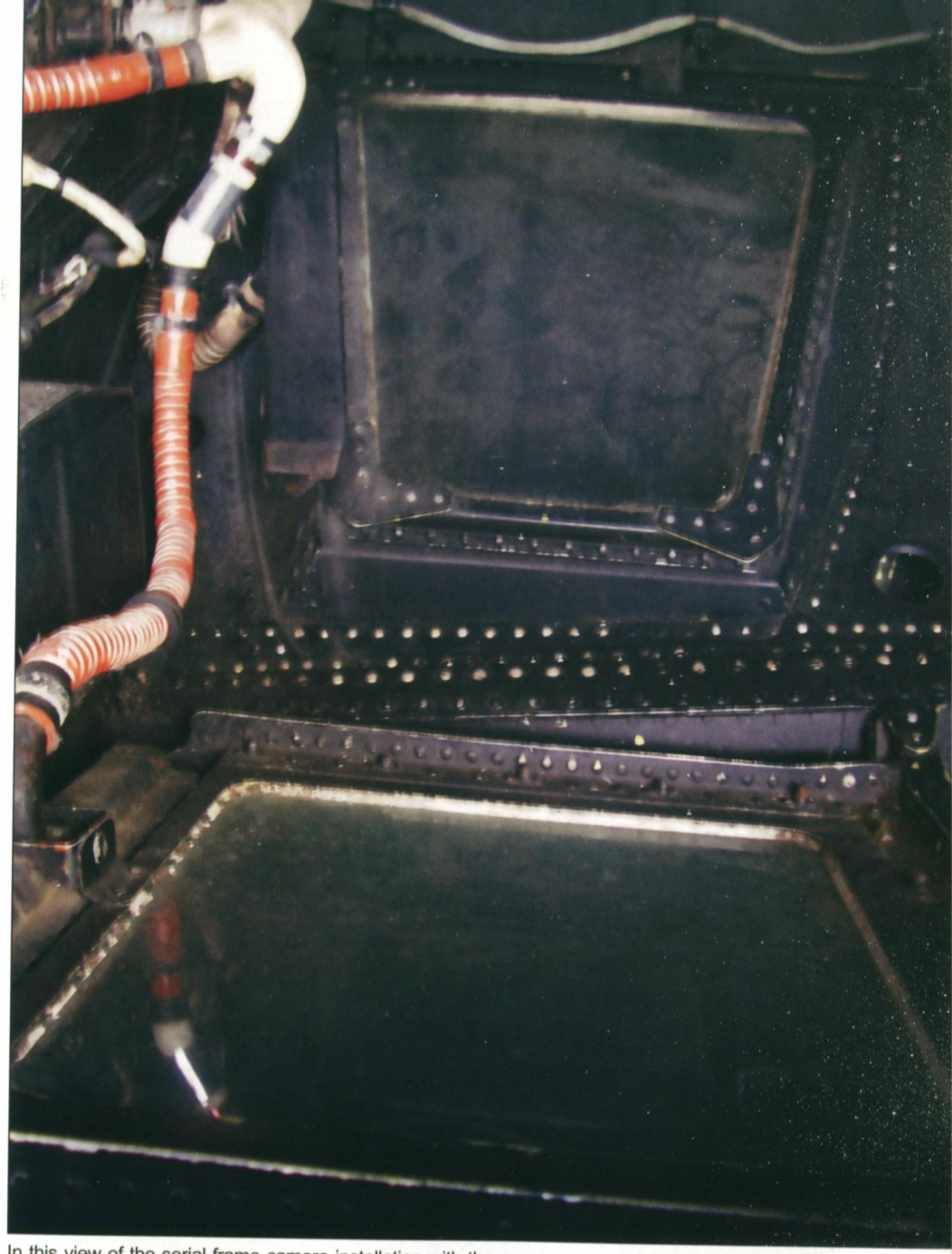
The camera can be positioned in three angles. This is the gear-tooth track that a mechanism holding the camera rides on for positioning. *(Ken Neubeck)*

This is a view of the gear-tooth track located toward the rear of the aircraft with respect to the right window for the camera. The shots taken by this camera during a mission would be for enemy troop movements as well as mapping out terrain. *(Ken Neubeck)*

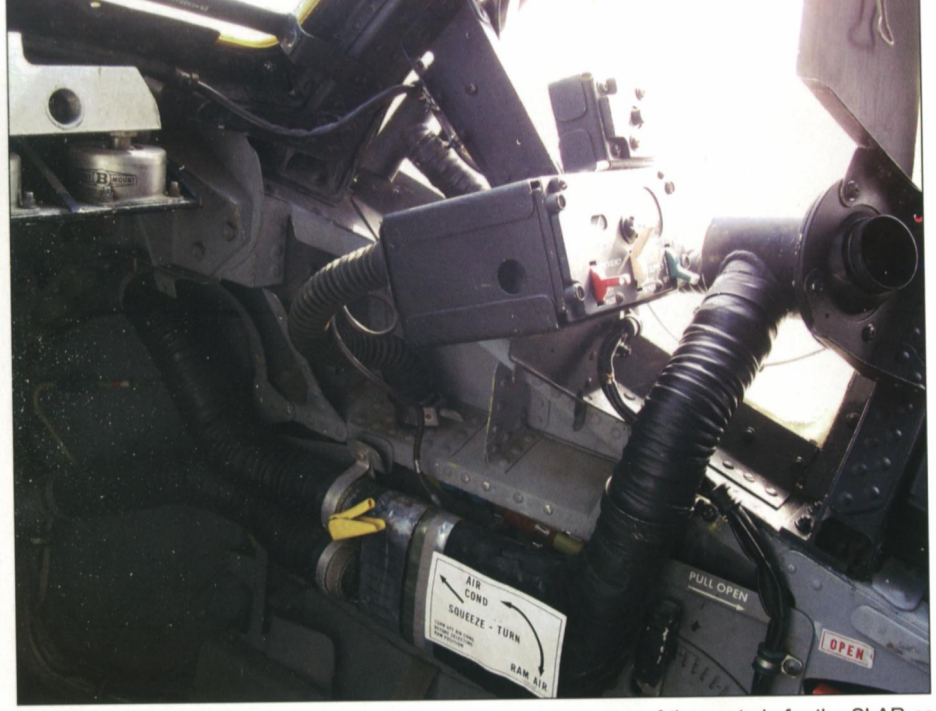




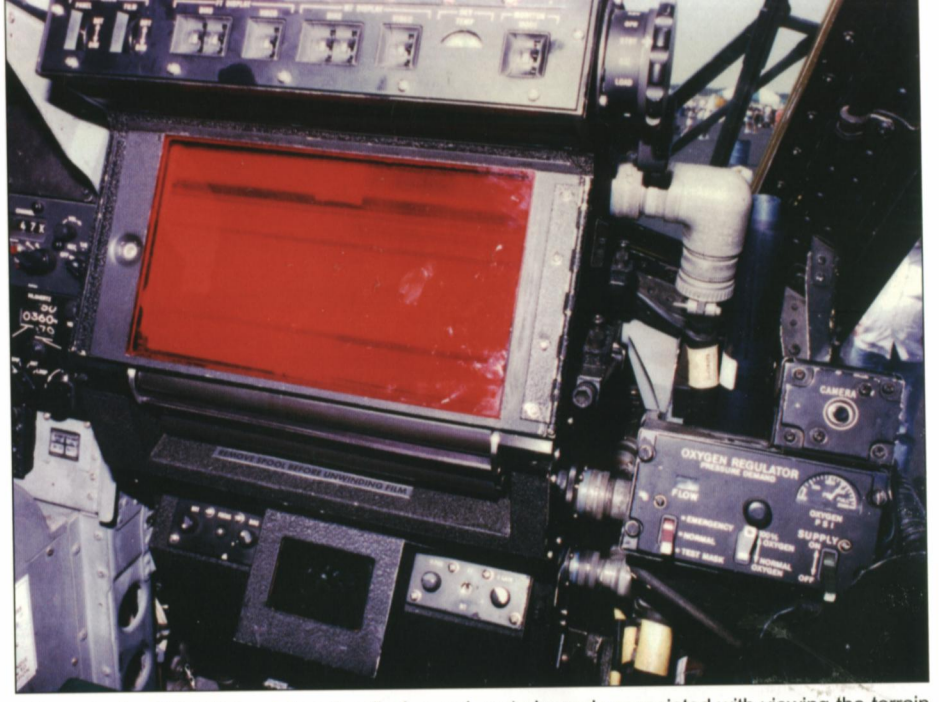
This is a view of the right side window and the lower window through which the camera can photograph. All of the windows are covered on the outside portion by sheet metal when not in use. *(Ken Neubeck)*



In this view of the serial frame camera installation with the camera removed, both the right and the left window can be seen. The shape of each window is symmetrical to the other window with a slight trapezoid pattern. *(Ken Neubeck)*



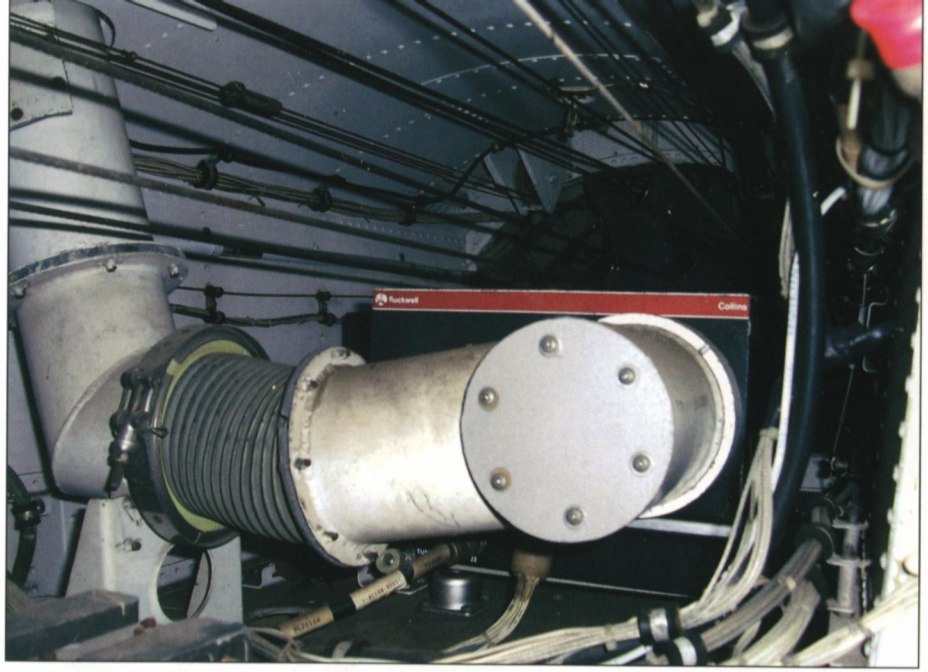

The observer side of this civilian OV-1D cockpit does not have any of the controls for the SLAR or camera. It has the oxygen regular control panel. *(Ken Neubeck)*




This particular OV-1 Mohawk has the display and control panels associated with viewing the terrain through the SLAR pod. *(John A. Gourley III)*

The SLAR pod is made out of fiberglass and is attached to the fuselage at two connecting points. The SLAR pod can be opened as well. *(John A. Gourley III)*

The SLAR pod extends in front of the nose section by more than 2 feet. It can be removed quickly and replaced by another system if required. *(John A. Gourley III)*




This internal view toward the rear of an OV-1D shows the various flight control cables that control the rudder control surfaces as well as electrical wiring. *(Ken Neubeck)*

This is the exit point from the top part of the fuselage for the fixed HF wire antenna. *(Ken Neubeck)*

The Mohawk has a fixed HF wire antenna that comes out of the top part of the fuselage toward an attachment point on the middle stabilizer and then is routed toward an attachment point on top of the cockpit. *(Ken Neubeck)*

The automatic direction finder (ADF) antenna is another fixed wire antenna for the Mohawk, located on the bottom of the fuselage near the red navigation light. Nearby, there is a VHF/UHF blade antenna on the lower fuselage. *(Ken Neubeck)*

The structure on the bottom fuselage at the top of the photo is where the all-weather AN/APN-171 altimeter is located. Toward the middle of the photo is another structure, where the AN/AD-6 radiac system is located. This system detects radiation levels underneath the aircraft's flight path, and if dangerous levels of radiation are detected an alarm is triggered in the cockpit of the aircraft. Toward the rear of the aircraft is a ring structure that is the tailskid, whose purpose is to prevent any damage during the event of overrotation. *(Ken Neubeck)*

In this view of the lower fuselage of an OV-1D Mohawk, there is a blister structure where the KA-60 camera is mounted as well as the red navigation light. The fixed ADF wire antenna is located on the left side of the lower fuselage. In the middle of the photograph is a VHF/UHF blade antenna, and in front of this antenna is one module of the chaff and flare dispenser. A panel has been put in front of this module where another module would have been located. *(Ken Neubeck)*

An OV-1A trains with U.S. Army personnel at the 11th Air Assault Division located in Fort Benning, Georgia, in 1963. This division would be redesignated as the 1st Air Cavalry Division in Vietnam in 1965. *(Grumman archives via Cradle of Aviation)*

A pair of OV-1A Mohawks are being prepared for training at Fort Benning in 1963. Note the 300-gallon fuel tanks located on trailers in the foreground. *(Grumman archives via Cradle of Aviation)*

An OV-1B comes in for a landing with all landing gears down and wing flaps deployed during a training exercise during the 1960s. *(Grumman archives via Cradle of Aviation)*

During its initial service in the U.S. Army, the Mohawk set several altitude and speed records for a turboprop-class aircraft. *(Grumman archives via Cradle of Aviation)*

An OV-1D Mohawk prepares for takeoff during an air show in Florida. Although the aircraft has been officially out of U.S. Army service since 1995, there are still several Mohawks, primarily the OV-1D model, that are flying in service by civilian operators and the Argentine Army Aviation. This particular OV-1D is outfitted with a seven-rocket launcher pod underneath its right wing. Also, the routing of the fixed wire HF antenna can be seen clearly with this shot, going from the rear fuselage to the middle stabilizer and then toward an extension on top of the cockpit. The propellers for this aircraft have the ends of the blades painted yellow and are turning as the crew completes final checkout prior to takeoff. *(André Jans)*

This is a restored, privately owned OV-1D Mohawk that is outfitted with the SLAR pod; it is preparing for takeoff at an air show. *(John A. Gourley III)*

Another restored OV-1D Mohawk aircraft performs a flyover at an air show. Mohawks are regular performers at many air shows. *(John A. Gourley III)*

This restored OV-1D Mohawk has an orange paint scheme on parts of the fuselage to represent the colors of a training aircraft. *(Ken Neubeck)*

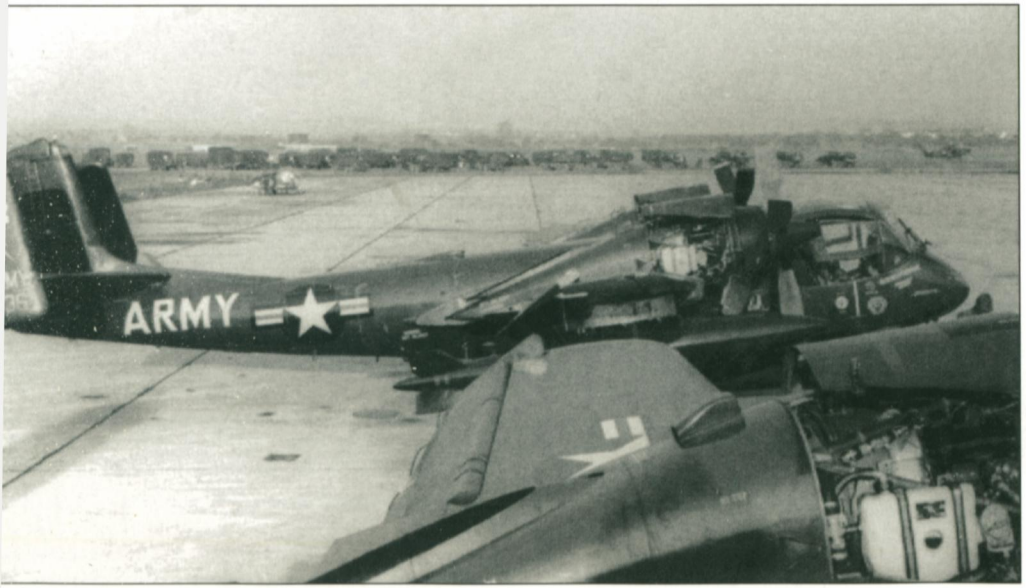
A pair of JOV-1A Mohawks taxi for takeoff on a mission from Qui Nhon airfield in Vietnam during the summer of 1965. These aircraft were on temporary duty (TDY) in support of the 2nd Corps. *(Edward Bavaro)*

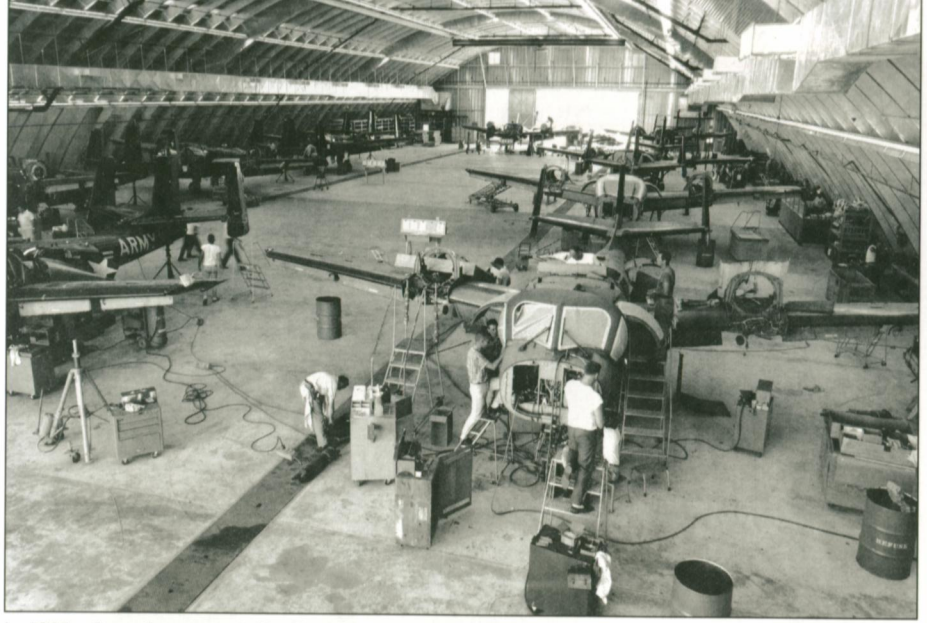
During the early 1960s, one of the first overseas deployments for Mohawks was to West Germany. This pair of OV-1B Mohawks (59-2636 and 62-5878), part of the Rear 122nd Aviation Company, are being serviced on the runway at Hanau, West Germany. *(Gerald Nelson)*

This Mohawk collided with another Mohawk that was trying to verify that the landing gear was down on this aircraft, as there was no gear down indication. Unfortunately, the left propeller of this aircraft struck the canopy of the other Mohawk that then crashed, killing the crew. *(Gerald Nelson)*

Both of these OV-1B Mohawks at Hanau are having their engines serviced by ground crew making use of the quick-release access doors to access engine components. *(Gerald Nelson)*

This is a close-up view of one of the OV-1B Mohawks (59-2636 in West Germany) that had the Tweetie Bird motif painted on the forward fuselage. *(Gerald Nelson)*

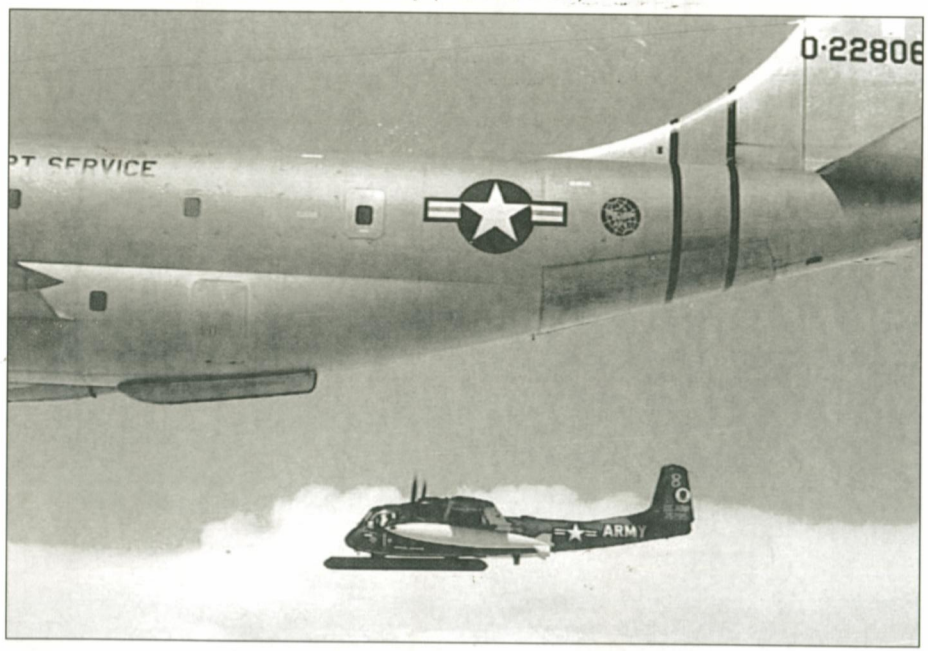




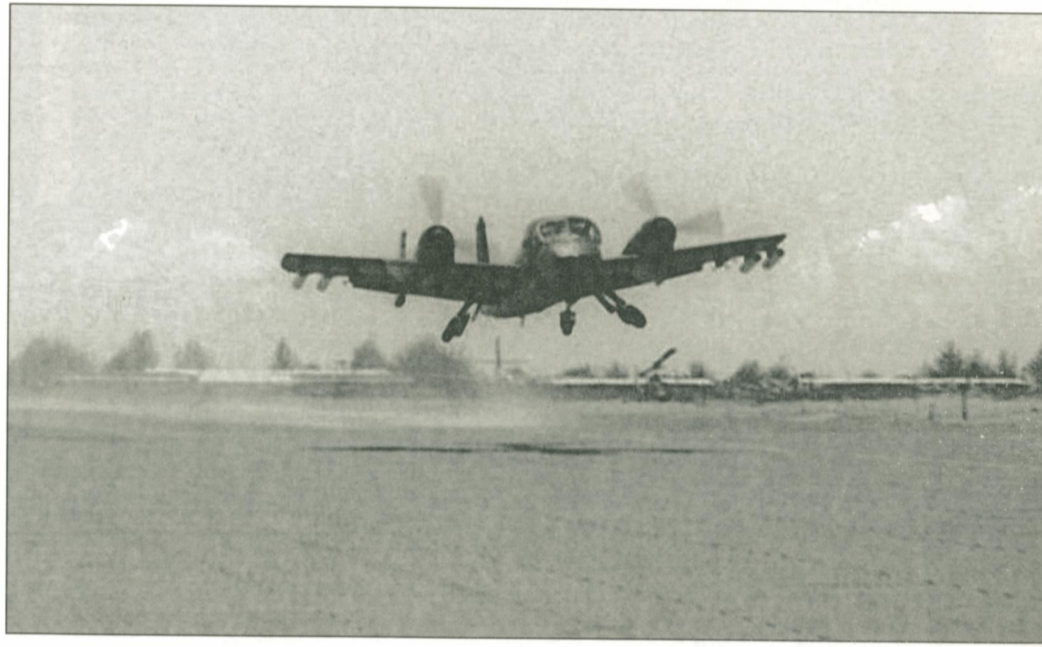
In 1967, after a three-year lull in OV-1C production, the production line was transferred to the Grumman facility at Stuart, Florida. *(Grumman archives via Cradle of Aviation)*

Dozens of OV-1B and OV-1C aircraft are parked near the runway in one of the U.S. Army bases in the Georgia area during the late 1960s. Note that the aircraft in the foreground does not have air brakes, yet the one next to it has the brakes partially deployed. *(Douglas V Guentz)*

An OV-1B Mohawk flies alongside a U.S. Air Force KC-97 Stratotanker during the ferry flight from Subic Bay in the Philippines to Vung Tau RVN Base in Vietnam during the war. This Mohawk is equipped with the 300-gallon external fuel tanks for this ferry. *(Edward Bavaro)*




A JOV-1A aircraft takes off during a morning mission from Vung Tau airfield in Vietnam over the Mekong Delta across the bay during the summer of 1965. *(Edward Bavaro)*



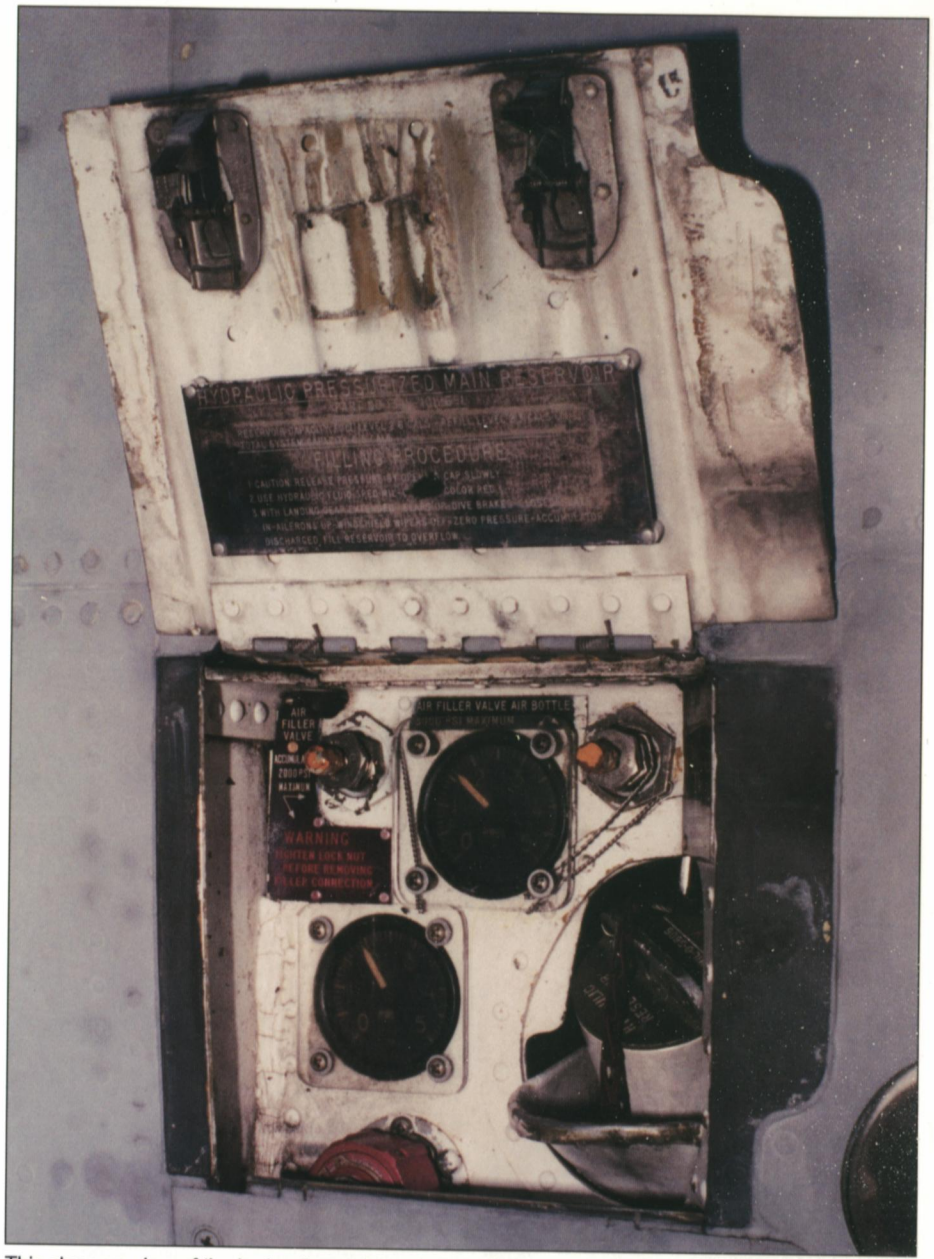
OV-1 Mohawks were initially sent to Vietnam in 1962 to provide detailed intelligence of enemy troop movement. Ground personnel prepare this OV-1A for a mission. *(Grumman archives via Cradle of Aviation)*

Several OV-1A Mohawks are parked at a base in Vietnam. The Mohawk was able to operate from runways that were not in optimal conditions. *(Grumman archives via the Cradle of Aviation)*

Ground personnel load rockets into the rocket launcher located on the pylon of this JOV-1A. Mohawks were initially armed during the war, but this stopped in 1965 when the Air Force complained about the Army performing armed missions. *(Grumman archives via the Cradle of Aviation)*

An OV-1A Mohawk comes in for a landing on the tarmac of one of the forward bases in Vietnam after completing a mission. Mohawks provided intelligence in Vietnam for the entire war. *(Grumman archives via Cradle of Aviation)*

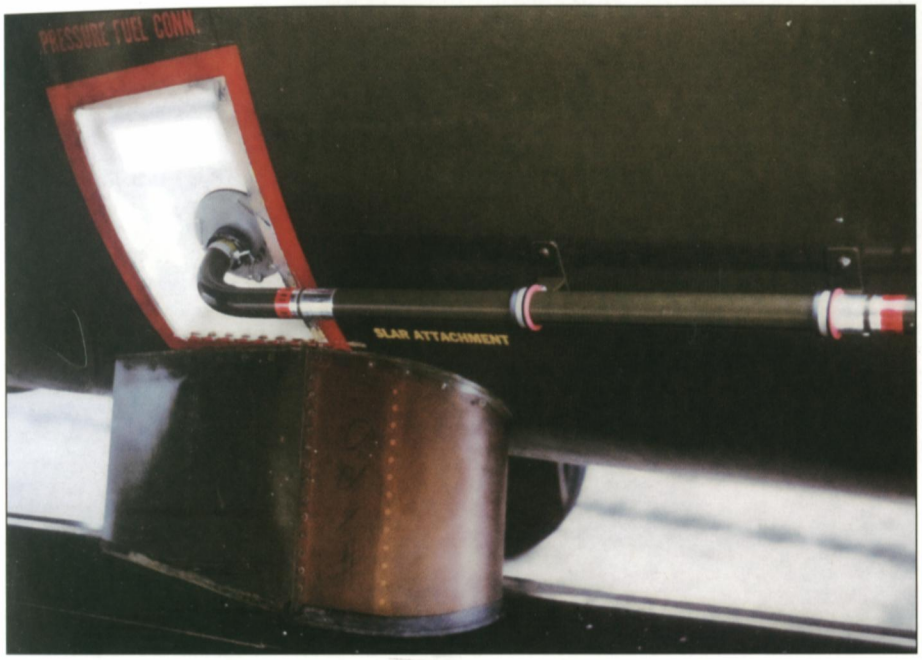
Located immediately behind the propeller warning line on the right side of the aircraft is an access door for pneumatic and hydraulic servicing. This door is opened quickly by pushing in and releasing the two quick-release latches located at the bottom of the door. *(Ken Neubeck)*




This close-up view of the hydraulic servicing area shows the instructions on the door itself along with two pneumatic refill ports. The port located on the left is for the air filler valve that is read by the gauge below it with a maximum pressure of 2,000 PSI. The port on the right is for the air filler valve air bottle and is read by the gauge directly to the left of it with a maximum pressure of 3,000 PSI. The cap on the left is for refilling the hydraulic reservoir with military grade (MIL-D-5605) fluid. *(John A. Gourley III)*

Refueling the Mohawk can be done either of two ways — gravity refueling or pressurized refueling, depending on the type of refueling truck and equipment that is available. Above is the refueling access door for pressurized refueling that has three quick-release latches. Pressure refueling for the Mohawk is less than 50 PSI, and higher pressure could damage the fuel system. *(Ken Neubeck)*

After the panel is opened, pressure refueling is accomplished by attaching the pressurized fitting onto the red filler cap. The black control panel that is located directly above the filler cap controls refueling through a series of switches that are controlled by the maintenance personnel. *(Ken Neubeck)*

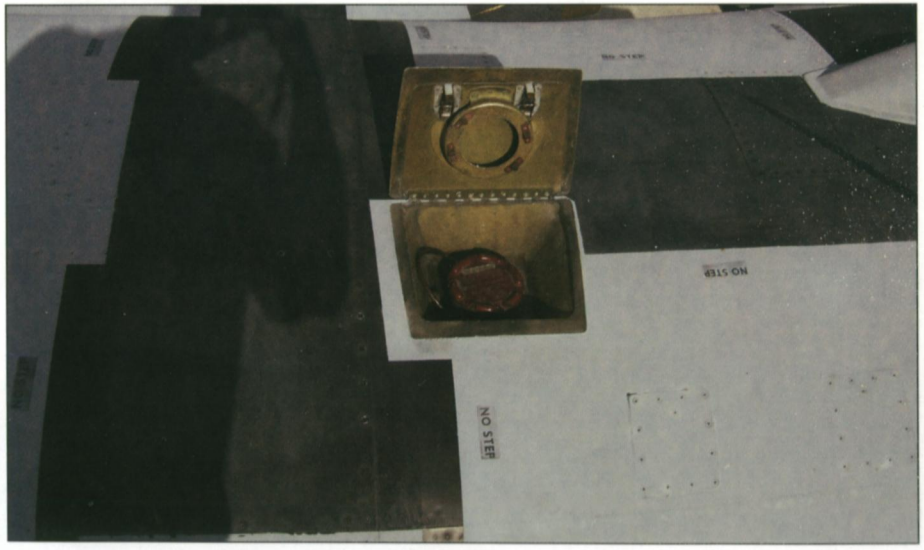



The setup above is for a pressurized aerial refueling test program that this OV-1B Mohawk (62-5868) underwent during 1964, in which a metal pipe was located on the side of the fuselage and attached to the refuel receptacle on the side of the fuselage. (*Douglas V Guentz)*

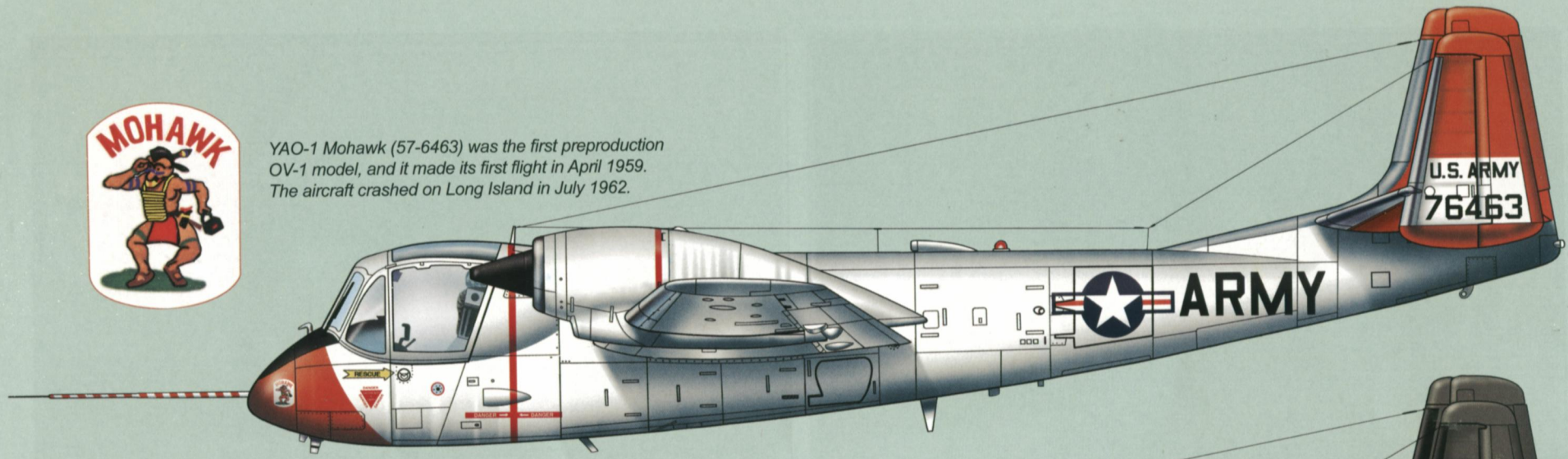
Here is another view of the complete aerial refuel attachment that was fitted on this OV-1B for this experimental test program. *(Douglas V Guentz)*

An OV-1B test aircraft undergoes aerial refueling via a tanker by connecting the test probe setup to the tanker line. This feature did not get implemented into production. *(U.S. Army via Douglas V Guentz)*

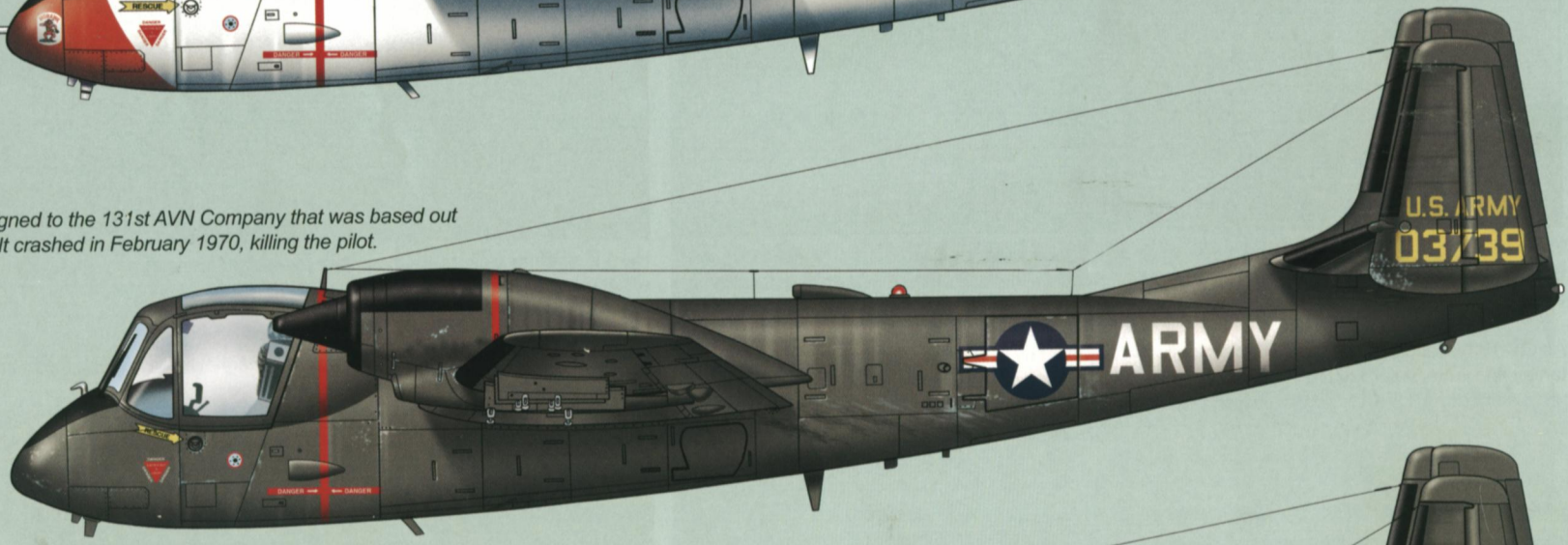
Gravity refueling can be accomplished on the Mohawk through the top of the plane via an access door located in the middle of the wing. *(Ken Neubeck)*



*YAO-1 Mohawk (57-6463) was the first preproduction OV-1 model, and it made its first flight in April 1959. The aircraft crashed on Long Island in July 1962.*

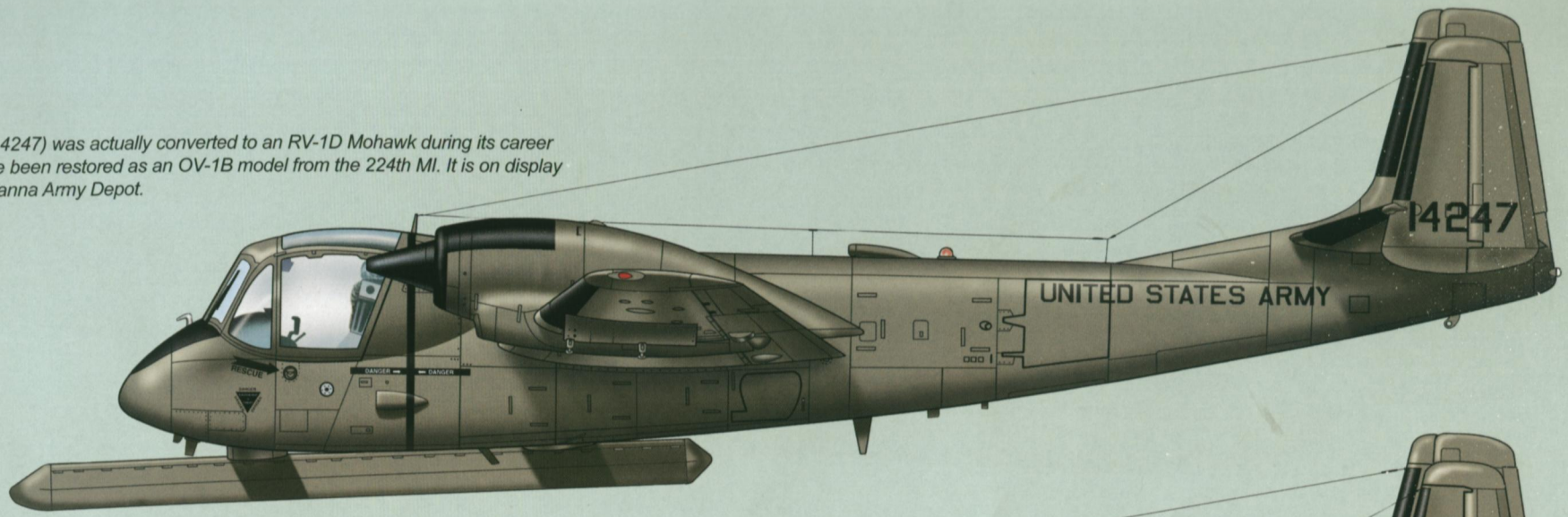



*OV-1A (60-3739) was assigned to the 131st AVN Company that was based out of Thua Thien in Vietnam. It crashed in February 1970, killing the pilot.*

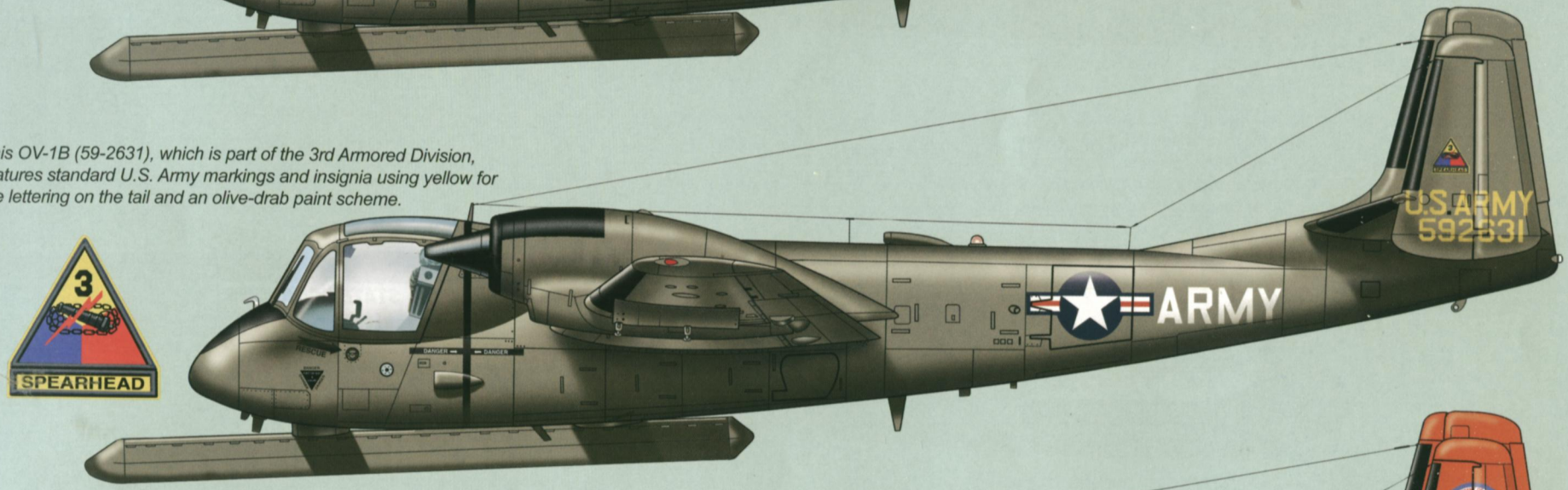



*This JOV-1A Mohawk (59-2603) was the first production OV-1A Mohawk, and it was the first Mohawk lost in Vietnam when it crashed in December 1963 in Vinh Long, killing the pilot and observer.*

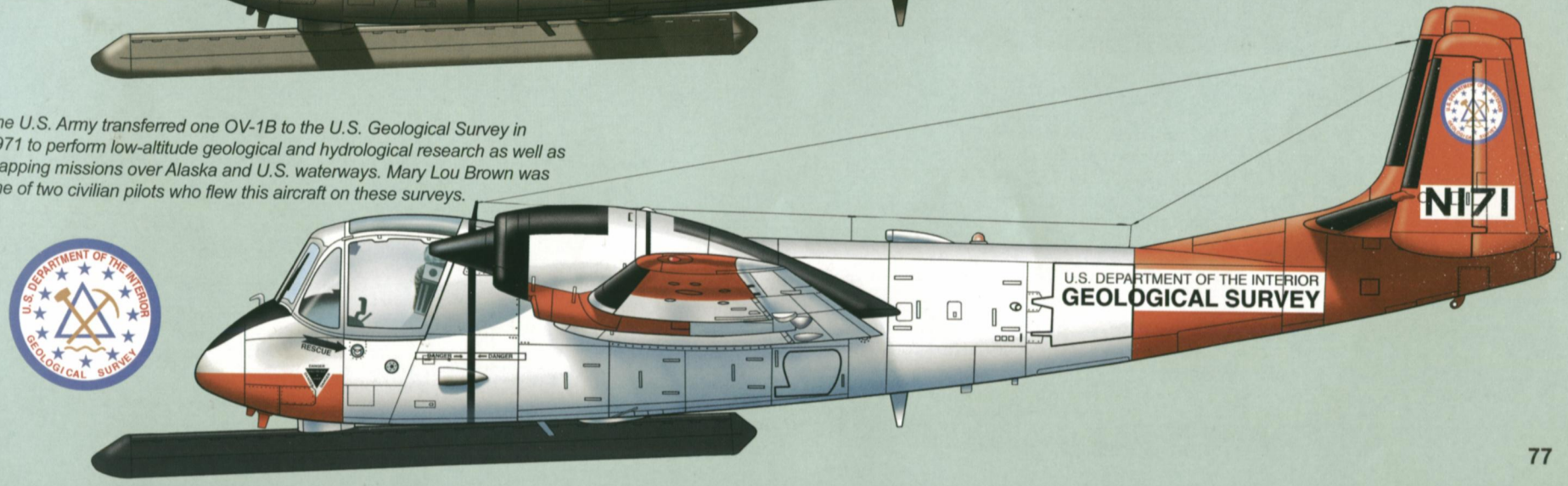
*OV-1B (64-14247) was actually converted to an RV-1D Mohawk during its career but has since been restored as an OV-1B model from the 224th MI. It is on display at the Tobyhanna Army Depot.*



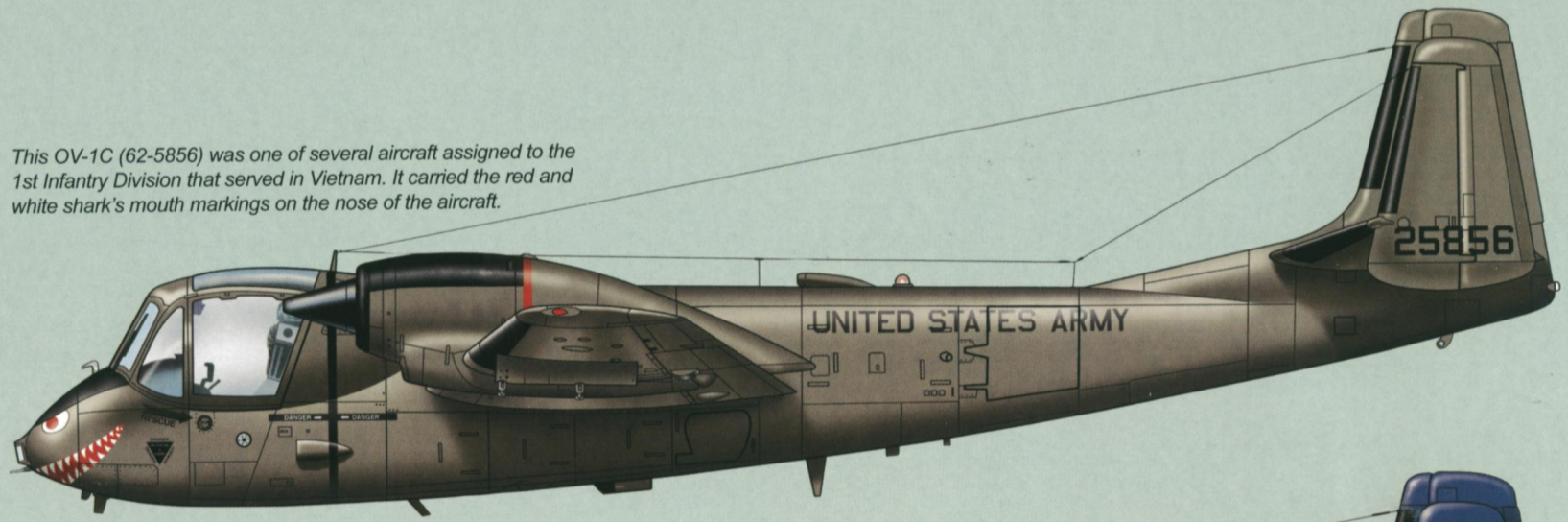

*This OV-1B (59-2631), which is part of the 3rd Armored Division, features standard U.S. Army markings and insignia using yellow for the lettering on the tail and an olive-drab paint scheme.*




*The U.S. Army transferred one OV-1B to the U.S. Geological Survey in 1971 to perform low-altitude geological and hydrological research as well as mapping missions over Alaska and U.S. waterways. Mary Lou Brown was one of two civilian pilots who flew this aircraft on these surveys.*

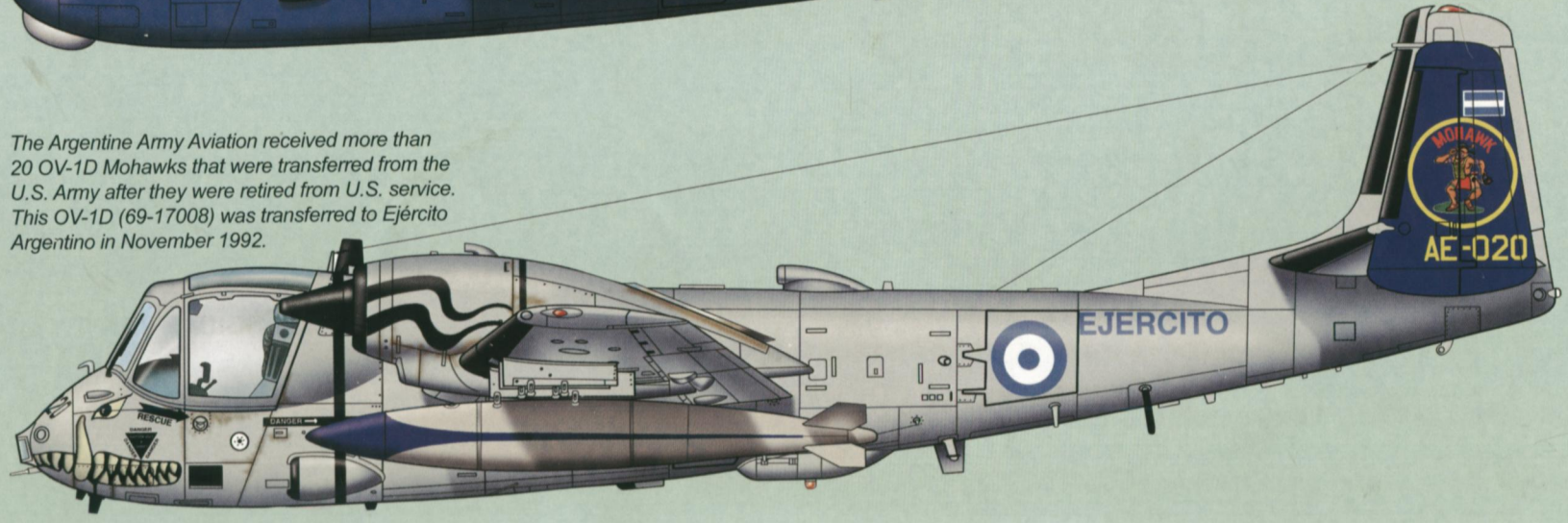


*This OV-1C (62-5856) was one of several aircraft assigned to the 1st Infantry Division that served in Vietnam. It carried the red and white shark's mouth markings on the nose of the aircraft.*

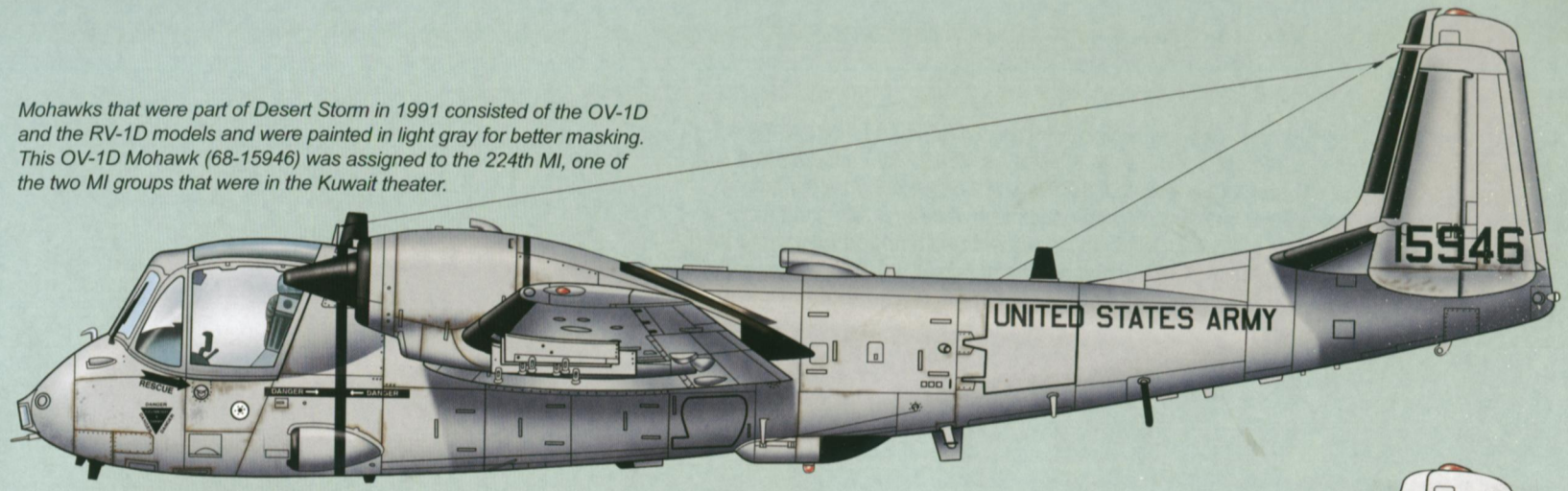



*Two OV-1C Mohawks (M6743/60-3758 and N6740/61-2699) were transferred from the U.S. Army to U.S. Customs in 1972 to track drug-running aircraft. They were retired from the service in 1981.*

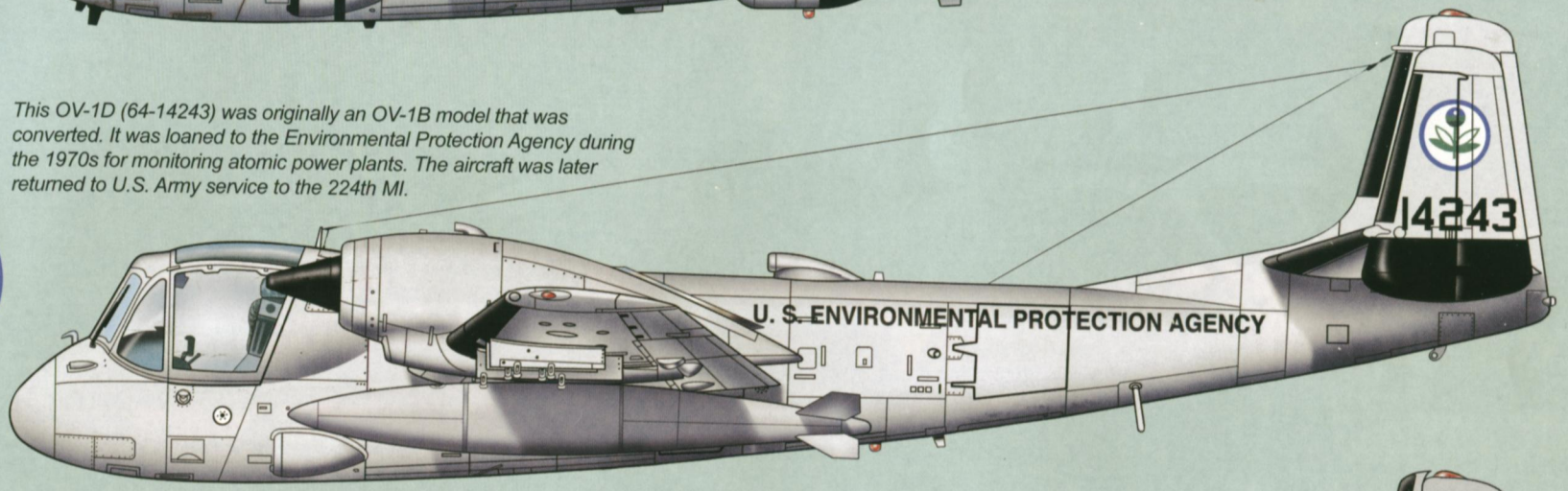
*The Argentine Army Aviation received more than 20 OV-1D Mohawks that were transferred from the U.S. Army after they were retired from U.S. service. This OV-1D (69-17008) was transferred to Ejército Argentino in November 1992.*



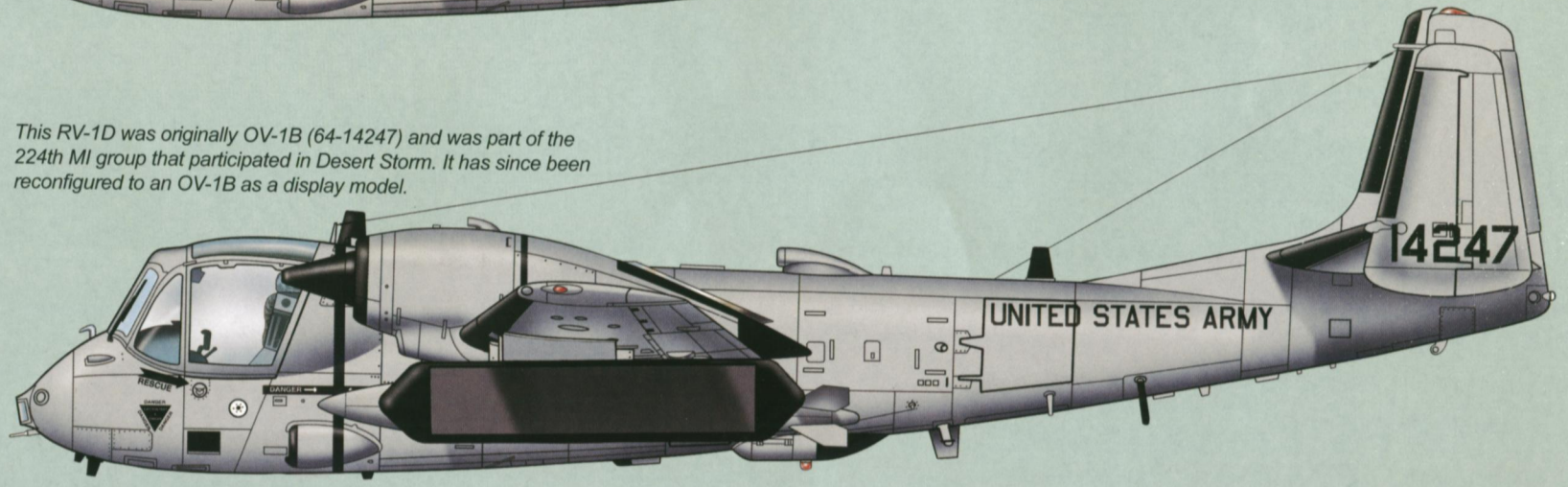
*Mohawks that were part of Desert Storm in 1991 consisted of the OV-1D and the RV-1D models and were painted in light gray for better masking. This OV-1D Mohawk (68-15946) was assigned to the 224th MI, one of the two MI groups that were in the Kuwait theater.*




*This OV-1D (64-14243) was originally an OV-1B model that was converted. It was loaned to the Environmental Protection Agency during the 1970s for monitoring atomic power plants. The aircraft was later returned to U.S. Army service to the 224th MI.*




*This RV-1D was originally OV-1B (64-14247) and was part of the 224th MI group that participated in Desert Storm. It has since been reconfigured to an OV-1B as a display model.*



*Several OV-1D models have been restored and are active, flying aircraft that are seen regularly at air shows throughout the United States, such as 67-18926. These aircraft still have the original cockpit equipment needed to fly the aircraft. Generally, most of these aircraft have been stripped of military surveillance equipment, although some will have SLAR-associated components installed. Because the aircraft has a turboprop engine that is able to be maintained and has components that can be obtained, it will be active in the air show circuit in the future. (John A. Gourley III)*

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